

Marine Angler Expenditures in the Northeast Region, 1998

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In 1998, a recreational fishing expenditure survey was conducted in the Northeast region as an add-on to the National Marine Fisheries Service's Marine Recreational Fisheries Statistics Survey (MRFSS). This report summarizes the results of the expenditure survey, and provides state-level estimates of direct sales resulting from anglers' expenditures in 1998.

Executive Summary

Anglers' daily trip expenditures are reported for each state and fishing mode by resident type (i.e., state resident or non-resident). Expenditures on fishing equipment and other semi-durable and durable items used primarily for saltwater recreational fishing are provided at the state-level. Sample descriptive statistics (means, weighted means, and standard errors) are presented by state for all expenditure estimates and confidence intervals calculated for the total expenditure statistics. Total resident expenditures were considerably larger than that of non-residents. Recreational participants in Massachusetts, Maryland, and New Jersey incurred the highest total recreational fishing expenditures in the Northeast region. Anglers fishing in these states spent between \$600 and \$900 million on marine recreational fishing in 1998. Across all Northeast states, recreational fishing expenditures in 1998 totaled \$4.5 billion.

Introduction

Nearly 4.1 million saltwater anglers fished 20.6 million days in the Northeast region of the U.S. (Maine through Virginia) in 1998 (NMFS 2000). In addition to the leisure benefits these anglers received from participating in saltwater fishing, their expenditures generated monetary benefits in the form of sales, income, and employment throughout the Northeast. A variety of goods and services were purchased from sporting goods stores, speciality stores, bait and tackle shops, guide services, marinas, grocery stores, automobile service stations, and restaurants. The economic impacts of these purchases rippled throughout the Northeast's economy and provided incomes and jobs in manufacturing, transportation industries, and service sectors. With the passage of the Sustainable Fisheries Act (P.L. 104-297) in 1996 which amended the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), Congress mandated the analysis of economic impacts of management policies on fishing participants and coastal communities. A similar appraisal is also required under the National Environmental Policy Act (NEPA) and Executive Order 12866. As a result, in 1998 the National Marine Fisheries Service (NMFS) conducted an economic expenditure survey in the Northeast (NE) United States to evaluate recreational fishing expenditures and the economic impacts generated from these

expenditures in this region.

The expenditure survey was conducted as part of the 1998 Marine Recreational Fishery Statistics Survey (MRFSS) in the NE and was a follow-up to a comprehensive NE marine recreational economic survey conducted in 1994 (Steinback et. al. 1999).

The purpose of this report is to summarize the results of the 1998 economic expenditure survey and to provide state-level estimates of direct sales resulting from anglers' expenditures in the NE in 1998. Summary statistics presented in this document will be used in the future to assess total sales, income, and employment generated from angler expenditures. The report begins with a brief description of the base MRFSS and the economic data collection methods used to date. Survey response rates are then discussed followed by a review of the procedures used to estimate expenditures. Sample statistics (means, weighted means, and standard errors) are provided by state for all expenditure estimates and confidence intervals are shown for the total expenditure statistics. The report concludes with a review of major findings, a description of data collection efforts in other regions of the U.S., and a discussion of future research.

The Marine Recreational Fisheries Statistics Survey

The Base Surveys

Since 1979, the MRFSS has collected data to estimate the total bimonthly fishing effort (number of days fished), participation, and finfish catch by marine recreational anglers in the Northeast. The MRFSS consists of two independent yet complementary surveys: an intercept survey of marine anglers at fishing access sites and a random digit dial (RDD) telephone survey of coastal county households. The intercept survey was designed to provide a random sample of all marine recreational fishing trips. Data from the intercept survey are primarily used to estimate mean catch-per-trip by species. Participation and effort are estimated using data acquired through the RDD survey of coastal households. Coastal county households are sampled randomly using the random digit dialing technique described by Groves et al. (1988). All anglers in a contacted household are identified, and each is asked about their fishing activity during the previous two-month period. The RDD survey therefore provides data to estimate effort and participation by coastal residents living in households with telephones. Ratios from the intercept survey are used to correct these effort estimates to account for non-coastal residents and coastal residents who do not have telephones, as those groups are not covered in the household sampling frame. Readers

unfamiliar with the MRFSS sampling procedures are encouraged to review Gray et. al (1999) for further details.

Expenditure Surveys

To take advantage of sampling, survey design, and quality control procedures already in place, the economic survey was designed as an add-on to the MRFSS. The economic expenditure survey involved three phases. The first phase added a series of questions to the MRFSS intercept survey, linking basic economic information to trip-specific catch information and behavior. Intercepted anglers were then asked to participate in the second phase of the survey, the telephone follow-up. The telephone follow-up solicited detailed expenditure data. The third phase added several of the expenditure questions asked on the follow-up survey to the RDD survey of coastal household residents.

The intercept survey collected information from both day-trip anglers and multi-day (overnight) anglers (Appendix 1). Information collected from multi-day anglers included, number of days away from residence, number of days spent fishing, and whether or not the primary purpose of the trip was for fishing. All anglers were asked how many days they fished in the last two months and whether they owned a boat used primarily for saltwater fishing.

The telephone follow-up survey collected detailed expenditure data (Appendix 2). Expenditure data

categories included trip-related goods (food, refreshments, lodging, travel costs, boat fuel, party/charter fees, access or boat launching fees, equipment rental, bait, and ice), fishing equipment and semi-durable items (rods, reels, lines, tackle, magazines, club dues, special fishing clothing, camping gear, binoculars, and taxi-dermy), and durable goods (motor boats and accessories, non-motorized boats, boating electronics, mooring, boat storage, boat insurance and vehicles or second homes used primarily for marine angling).

The RDD add-on survey was designed so that expenditure responses from a random sample of households could be compared to responses from a random sample of trips (i.e., to both the intercept and telephone follow-up surveys). As such, it collects a similar set of expenditure elements (Appendix 3). The RDD provides data that could be used to test for an avidity bias associated with collecting expenditure data from intercepted anglers.

Response Rates

A total of 34,700 economic intercepts were attempted and 27,835 (80%) were fully completed. Of the non-respondents, 1,395 refused to participate at all, 2,482 were terminated because the respondent was younger than 16, and the remainder refused to complete the entire questionnaire. Approximately 65% (18,045) of the respondents that completed the economic intercept survey agreed to participate in the

economic follow-up survey. However, only 6,342 of these anglers (35%) completed the entire economic follow-up questionnaire. Anglers that could not be reached in six calls comprised the majority of the non-respondents, followed by wrong numbers and a small number of refusals. For the RDD survey, a total of 85,402 households were contacted; 5,029 of these were identified as saltwater fishing households. Of the fishing households, 4,351 (87%) successfully completed the RDD survey.

Average Expenditures

Average daily trip expenditures were estimated for each state and fishing mode (party/charter boat; private/rental boat; and shore) by resident type (resident or non-resident). Anglers reported making two types of trips: day trips and multi-day (overnight) trips. Overnight anglers were asked to report trip length, number of days fished, and total trip cost. Total daily average cost was derived by dividing total costs by either the number of days fished or trip length (nights away from residence). Average daily costs for expenditures directly related to fishing, such as boat fuel, guide or package fees, access and/or boat launching fees, equipment rental (boat, fishing or camping equipment), bait, ice, and public transportation¹ were calculated by dividing the total amount spent by the number of days fished. For expenditures not directly associated with fishing (e.g., food/drink/refreshments and lodging at motels/cabins/lodges/campgrounds, etc.), average daily costs were derived by dividing total expenses on multi-day (overnight) trips by the length of these trips. This approach for estimating indirect average costs per day assumes constant daily food, beverage, and lodging expenditures for anglers on overnight trips.

Additional procedures were required to estimate private transportation costs. Round-trip mileage traveled in each state where fishing trips occurred was

estimated using PCMILER software (ALK Associates, Inc. 1995) and multiplied by 10.8 cents per mile (American Automobile Association estimate of the average per mile variable cost of operating a car in 1998) to calculate state-level private travel expenses. For overnight trips, daily expense estimates were determined by dividing total instate expenses by the number of days fished on the trip. Finally, since anglers identified how many people shared trip expenses, each angler's total daily transportation expense was divided by the average number of contributors, by state and mode. Apart from trip-related expenditures, anglers also purchase fishing equipment and other durable items used primarily for saltwater recreational fishing. Two-month estimates of average angler expenditures for fishing equipment and semi-durable items were calculated with data collected from the telephone follow-up survey.² Annual estimates of expenditures of durable items were also derived.

Sample Variability

Prior to generating expenditure estimates, various statistical tests and adjustments were made to the data. One-way analyses of variance (ANOVA) tests revealed that intercepted anglers in the NE fished significantly more days per two-month period (9.34 days), on average, than those contacted randomly over the phone for the RDD survey (5.49 days).³ This pattern was evident in 9 of the 10

Methods

states in the NE. In Delaware, no significant difference was detected in two-month fishing activity between intercepted anglers and phone-contacted anglers.

The ANOVA results were not surprising considering the sample selection differences between the intercept and RDD surveys. The RDD survey incorporated uniform selection probabilities with respect to contacting individuals. That is, avid anglers were just as likely to be interviewed as those that fished less frequently. In contrast, the probability of selection for the intercept survey was uniform across fishing trips, but higher for participants who fished more frequently. As a result, avid anglers were disproportionately represented in the intercept sample. This avidity bias does not effect the estimation of anglers' daily trip expenditures since the selection probability was uniform across fishing trips. However, the bias may effect the 2-month and annual expenditure estimates to the extent they are correlated with avidity.

Linear regression analyses were conducted to determine relationships between 2-month and annual expenditures and avidity. It was hypothesized that avidity was positively related to both 2-month and annual expenditures. Avid anglers would likely require more fishing equipment and spend more money on semi-durable and durable items than the general fishing population. For durable

expenditures, all items were regressed on 12-month avidity. The signs on the variables were all positive and the t-statistics were significant at the 0.05 level for every variable except cabins/second homes (Table 1). Results were similar for the 2-month fishing equipment expenditures. Regressions of rods/reels/lines and tackle/gear purchases on 2-month avidity showed a significant (at the 0.05 level) positive relationship. The relationship between 2-month avidity and the semi-durable expenditures was positive and significant (at the 0.05 level) for all items except camping equipment. The insignificance of cabins/second homes and camping equipment may have been a factor of low sample sizes. Overall, these results support the claim that avid anglers tend to spend more than the general fishing population on bi-monthly and annual purchases of

Table 1. Results (Coefficients) of Regression Analyses that Describes the Effect of Angler Avidity on Fishing Equipment, Semi-Durable, and Durable Expenditures (t-values in parentheses).

Dependent Variables	Explanatory Variables		Sample Size
	2-month avidity	12-month avidity	
Fishing Equipment			
Rods/Reels/Lines	2.657 (10.418) *		4,659
Tackle/Gear	1.264 (11.047) *		4,643
Semi-Durables			
Camping Gear	0.028 (0.983)		5,152
Binoculars	0.065 (3.202) *		5,164
Special Fishing Clothing	0.319 (7.078) *		5,155
Taxidermy	0.253 (1.996) *		5,170
Magazines	0.071 (4.633) *		5,145
Durables			
Motor Boats and Accessories		6.806 (4.686) *	5,115
Non-motorized Boats		0.024 (2.014) *	5,144
Fishing Electronics		0.275 (5.499) *	5,125
Vehicles		1.639 (2.198) *	5,126
Cabin/Second Home		0.005 (0.194)	5,157

*significant at the 0.05 level

fishing equipment and durable goods.

ANOVAs were also conducted to compare estimates of mean expenditures from the intercept data with those derived from the RDD survey. Average expenditures on durable goods, semi-durable goods, and fishing equipment were compared between the two surveys. In almost all cases,

sponses from avid anglers. Because of the positive relationship between avidity and expenditures, the intercepted responses are upwardly biased. To correct for the avidity bias, weighted means were calculated as described below.

Procedure to Correct for Avidity Bias

Using a procedure adapted from Thomson (1991), estimates of means were computed as follows:

$$(1) \quad \hat{R} = \frac{\sum_s \frac{Y_k}{X_k}}{\sum_s \frac{1}{X_k}},$$

where \hat{R} is the weighted mean (the “hat” notation denotes estimated quantities); Y_k is the expenditure of angler k ; X_k is the avidity of angler k ; and s represents the population sample. Equation (1) corrects for the unequal selection probabilities of intercepted anglers due to the avidity bias and produces consistent estimates of mean expenditures with relatively high precision.⁴ The associated variance, $\hat{V}(\hat{R})$, developed by Thomson (1991), was estimated by

$$(2) \quad \hat{V}(\hat{R}) = \left[\frac{\sum_s \frac{Y_k}{X_k}}{\sum_s \frac{1}{X_k}} \right]^2 \frac{1}{m} \left[\frac{S_{\frac{Y}{X}}^2}{\hat{R}^2} + \frac{S_{\frac{1}{X}}^2}{1} - \frac{2S\left(\frac{Y}{X}\right)\left(\frac{1}{X}\right)}{\hat{R}} \right];$$

Table 2. Results of Analysis of Variance Tests to Compare RDD and Intercept Follow-up Expenditure Means in the Northeast

Expenditures	Mean (\$)		P-value
	RDD	Intercept	
Fishing Equipment			
Rods/Reels/Lines	39.76	77.12	0.0001 *
Tackle/Gear	27.78	37.45	0.0131 *
Semi-Durables			
Special Fishing Clothing	7.84	9.81	0.0072 *
Magazines	2.91	4.38	0.0001 *
Club Dues	4.24	4.77	0.1817
Durables			
Motor Boats and Accessories	645.24	1339.44	0.0001 *
Non-motorized Boats	3.55	4.1	0.5138
Boating Electronics	27.28	44.07	0.0001 *
Vehicles	281.79	358.35	0.1355

* indicates significance differences (P<0.05)

average expenditures estimated from the intercepted respondents were significantly higher (P<0.05) than the estimates obtained from the RDD survey (Table 2).

In combination, the statistical evaluations indicate that the 2-month and annual data collected from intercepted anglers do not reflect the expenditure patterns of the general fishing population - assuming the RDD survey captures the spending behavior of the general population. Estimates generated from the intercepted sample contain a higher proportion of re-

where

$$S_{\frac{Y}{X}}^2 = \frac{1}{m-1} \left[\sum_s \left(\frac{Y_k}{X_k} \right)^2 - m \left(\overline{\frac{Y_k}{X_k}} \right)^2 \right],$$

$$S_{\frac{1}{X}}^2 = \frac{1}{m-1} \left[\sum_s \left(\frac{1}{X_k} \right)^2 - m \left(\overline{\frac{1}{X_k}} \right)^2 \right],$$

and

$$S_{\left(\frac{Y}{X}\right)\left(\frac{1}{X}\right)} = \frac{1}{m-1} \left[\sum_s \frac{Y_k}{X_k^2} - m \overline{\frac{Y_k}{X_k}} \overline{\frac{1}{X_k}} \right].$$

m is the number of observations in the sample, $\overline{\frac{Y_k}{X_k}}$ is the sample mean of Y_k times the inverse of X_k , and $\overline{\frac{1}{X_k}}$ is the sample mean of the inverse of avidity for each angler k .

Angler expenditure estimates were further adjusted to account for the amount spent in NE coastal states. In the RDD survey, anglers were asked to estimate the proportion of trip and equipment expenditures spent in the fishing state, and the proportion of durable and semi-durable expenditures spent in their resident state. These proportions were used to adjust the expenditure estimates from the intercept survey prior to calculating arithmetic means for the trip-level items and weighted means for the 2-month and annual items. However, no adjustments were made to the semi-durable and durable items for intercepted respondents living outside the NE coastal states, as anglers were only asked to estimate the proportion of these expenditures spent in their

resident state. Therefore, rather than making untenable assumptions about the actual location of non-resident anglers' durable and semi-durable expenditures, the estimates only apply to purchases made by NE coastal state residents.

Total Expenditures

Arithmetic mean daily trip expenditures were multiplied by MRFSS estimates of total fishing effort (i.e., days fished in 1998; Table 3) to derive total expense estimates. Estimates were calculated by state, mode, and resident status. The variances of the total expenditure estimates were calculated according to Gray (1999) as follows:

(3)

$$\hat{V}(\hat{T}\hat{R}) = \hat{T}^2 \hat{V}(\hat{R}) + \hat{V}(\hat{T}) \hat{R}^2 - \hat{V}(\hat{T}) \hat{V}(\hat{R}),$$

where \hat{T} is the estimate of angler effort and \hat{R} is the arithmetic expenditure mean of the sample. Goodman (1960) showed that Equation (3) produces an unbiased variance estimate when \hat{R} and \hat{T} are independent random variables. Because trip-related items were collected randomly and estimates of R and T were calculated from different surveys, the variables were considered to be random and independent. Standard errors, derived from equation (3), were used to generate confidence intervals for trip-related expenditures at the 95 percent level.

Table 3. Estimated Number of Days Fished by State, Mode, and Resident Status, 1998¹.

State	Mode ²	Resident	Non-Resident	Total
Connecticut	pc	23,335	7,117	30,452
	pr	633,152	104,159	737,311
	sh	481,494	43,769	525,263
	Total	1,137,981	155,045	1,293,026
Delaware	pc	10,813	20,174	30,987
	pr	249,434	165,439	414,873
	sh	230,250	234,325	464,575
	Total	490,497	419,938	910,435
Maine	pc	1,338	1,501	2,839
	pr	204,113	52,255	256,368
	sh	257,668	152,017	409,685
	Total	463,119	205,773	668,892
Maryland	pc	86,921	71,651	158,572
	pr	1,280,683	255,273	1,535,956
	sh	795,584	317,290	1,112,874
	Total	2,163,188	644,214	2,807,402
Massachusetts	pc	92,455	48,755	141,210
	pr	1,421,035	329,558	1,750,593
	sh	1,174,373	356,007	1,530,380
	Total	2,687,863	734,320	3,422,183
New Hampshire	pc	13,431	15,755	29,186
	pr	99,260	19,280	118,540
	sh	60,691	63,741	124,432
	Total	173,382	98,776	272,158
New Jersey	pc	235,459	219,389	454,848
	pr	1,953,440	684,307	2,637,747
	sh	959,260	205,276	1,164,536
	Total	3,148,159	1,108,972	4,257,131
New York	pc	230,478	12,099	242,577
	pr	1,910,783	89,660	2,000,443
	sh	1,131,341	34,805	1,166,146
	Total	3,272,602	136,564	3,409,166
Rhode Island	pc	11,322	36,034	47,356
	pr	271,498	165,608	437,106
	sh	333,836	275,061	608,897
	Total	616,656	476,703	1,093,359
Virginia	pc	56,521	22,553	79,074
	pr	1,402,319	556,496	1,958,815
	sh	694,600	199,602	894,202
	Total	2,153,440	778,651	2,932,091

¹Estimates may vary slightly from NMFS (2000) due to rounding.

²pc = party/charter; pr = private/rental; sh = shore

not linked to a particular trip, estimates were computed by state and resident status. The resultant variance was calculated by substituting the MRFSS estimates of participation and variance in each strata for \hat{T} and $\hat{V}(\hat{T})$ in equation (3), and the weighted mean expenditures and variances estimated from equations (1) and (2) for \hat{R} and $\hat{V}(\hat{R})$. Standard errors were calculated from the resulting variance estimates for each expenditure item and confidence intervals were generated at the 95% level.

Finally, total estimated expenditures for durable items were calculated from the product of the annual weighted means and MRFSS estimates of annual resident fishing participation (Table 5). Total resident expense estimates were generated for each coastal state in the NE. Non-resident durable expenditure estimates were not calculated. Variances and confidence intervals were determined using the procedures outlined above for fishing equipment and semi-durable expenditures.

Total estimated fishing equipment and semi-durable expenditures were calculated by multiplying the 2-month weighted mean expenditures per participant by MRFSS estimates of total fishing participation by wave (each wave corresponds to a 2-month period; Table 4).⁵ Since these items are

Table 4. Estimated Number of Participants by State, Resident Status, and Wave, 1998¹.

State	Wave	Resident	Non-Resident	Total
Connecticut	2	7,793	1,894	9,687
	3	215,406	41,089	256,495
	4	146,865	32,596	179,461
	5	115,858	17,193	133,051
	6	18,281	7,327	25,608
Delaware	2	27,831	7,746	35,577
	3	68,126	81,553	149,679
	4	60,684	74,229	134,913
	5	39,495	81,055	120,550
	6	9,534	13,397	22,931
Maine ²	3	61,196	17,056	78,252
	4	108,591	97,143	205,734
	5	27,558	24,442	52,000
Maryland	2	68,466	37,781	106,247
	3	275,369	126,387	401,756
	4	278,758	174,739	453,497
	5	195,780	73,307	269,087
	6	56,891	23,046	79,937
Massachusetts	2	50,541	14,960	65,501
	3	383,673	119,879	503,552
	4	358,366	160,825	519,191
	5	125,372	63,053	188,425
	6	9,817	3,522	13,339
New Hampshire ²	3	64,662	22,102	86,764
	4	38,289	48,448	86,737
	5	6,940	3,560	10,500
New Jersey	2	56,609	20,097	76,706
	3	364,177	195,476	559,653
	4	357,337	289,885	647,222
	5	144,521	95,878	240,399
	6	32,571	7,970	40,541
New York	2	48,024	557	48,581
	3	375,199	18,732	393,931
	4	424,759	26,074	450,833
	5	179,871	11,264	191,135
	6	40,796	604	41,400
Rhode Island	2	21,157	13,867	35,024
	3	75,923	70,417	146,340
	4	62,425	129,445	191,870
	5	29,813	37,998	67,811
	6	11,250	21,680	32,930
Virginia	2	47,294	6,287	53,581
	3	304,885	228,007	532,892
	4	206,172	135,320	341,492
	5	122,152	41,469	163,621
	6	80,992	16,360	97,352

¹Estimates may vary slightly from NMFS (2000) due to rounding. The participation estimates contained in Table 2 are not additive across waves. A participant could have fished in more than one wave. Addition of the estimates across waves results in substantially greater number of annual participants than that shown in Table 3.

²No sampling is conducted in Maine and New Hampshire during wave 2 or 6.

Table 5. Total Estimated Number of Participants by State and Resident Status 1998¹.

State	Resident	Non-Resident	Total
Connecticut	290,105	72,993	363,098
Delaware	102,851	188,258	291,109
Maine	118,871	115,196	234,067
Maryland	452,486	306,886	759,372
Massachusetts	407,004	227,729	634,733
New Hampshire	64,666	58,195	122,861
New Jersey	428,519	357,368	785,887
New York	433,226	42,494	475,720
Rhode Island	95,670	187,217	282,887
Virginia	339,802	291,138	630,940

¹These participation estimates are not additive across states. A participant could have fished in more than one state. See NMFS (2000) for total Northeast region participation estimates.

Average Expenditures

Summary statistics (arithmetic means or weighted means, and standard errors) by state are presented for two nonexclusive groups of anglers: all respondents and spenders (even-numbered Tables 6-24). The 'spenders' estimates include only responses of individuals who reported an expense, while both spenders and non spenders are included in the 'all' category. Statistics are reported by state, resident category, and mode for the daily trip expenditures. However, since the fishing equipment, semi-durable, and durable items were not linked to particular trips, expenditure estimates for these items were generated only according to state and resident status.

Average daily trip expenditures for non-residents were generally higher than for residents in all of the coastal states in the NE. Non-residents tended to travel further within the fishing state and tended to make multi-day trips that required overnight lodging. In Massachusetts, for example, nonresidents fishing from party or charter boats spent \$6.00, on average, to fuel their automobile (i.e., private transportation) and \$13.18 for lodging (Table 14). Expenditures by resident anglers fishing aboard party or charter boats, on the other hand, averaged \$3.98 for private transportation and \$2.35 for lodging.⁶ Although the direction of the differences varied for many of the trip-related items, overall, non-residents tended to spend more than their

resident counterparts for most purchases. This anomaly is not easily explained. Non-resident anglers may lack the time or local knowledge that residents have to compare prices for trip items such as party/charter guide fees, equipment rental, food, bait, and ice. Non-residents may also be less experienced and may simply overspend to ensure they'll have adequate supplies for the trip. The largest daily trip expenditures across most of the states were for food/drink/refreshments, boat fuel, and party/charter guide fees.

Average weighted 2-month fishing equipment purchases (i.e., wave expenditures) on rods/reels and other tackle were considerably higher for residents than for non-residents in all of the states except New Hampshire. The largest differences occurred in Connecticut, New Jersey, and Maine. The weighted mean 2-month expenditures on rods and reels were approximately double the tackle and gear (other tackle) estimates across all states.

For the semi-durable and durable items, expenditure estimates could only be generated for residents of Northeast coastal states. Residents tended to spend more, on average, over a 2-month period for fishing clothing than any of the other semi-durable items. Residents also made considerable annual expenditures for two of the durable categories identified on the survey: new motor boat or motor boat accessories (power boat purchase) and vehicles used primarily for saltwater fishing (fishing vehicle). In addition,

average durable expenditures by resident ‘spenders’ were substantially higher than estimates generated from all residents. In New York, for example, the average weighted annual power boat expense for spenders was \$4,210.11 and only \$569.19 across all anglers (Table 20).

Total Expenditures

Total expenses and 95 percent confidence intervals are shown for all expenditure items by state and residence strata (odd-numbered Tables 7-25). Trip expenditures are further stratified by mode of fishing. The precision of the expenditure estimates can be evaluated by examining the difference between the estimate and the upper and lower bounds.

Total resident expenditures on trip-related items generally exceeded the amount spent by non-residents, even though average daily costs were higher for non-residents. Residents spent more, in total, because they fished approximately 2 to 5 times more days than non-residents in all of the NE states. In Connecticut, for example, residents fished more than 3 times as many days aboard party/charter boats than non-residents (Table 4). Therefore, even though average private transportation expenses were higher for non-residents (\$5.35) than for residents (\$3.70; Table 6), total annual resident private transportation expenditures associated with party/charter boat fishing (\$86,275) were over double non-resident outlays (\$38,102; Table 7).

However, non-residents spent more for food/refreshments and lodging in every state. In contrast, residents incurred greater annual expenses for fishing equipment items (rods and reels, other tackle) in all 10 NE states.

In total, resident and non-resident anglers in Massachusetts, Maryland, and New Jersey exhibited the highest recreational fishing expenditures in the NE region. Anglers fishing in these states spent between \$600 and \$900 million on marine recreational fishing in 1998. Across all NE states, total recreational fishing expenditures totaled \$4.5 billion (Table 26).

Table 6. Connecticut Average Expenditures by Mode and Resident Status, 1998.

CONNECTICUT		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	3.70	0.09	3.70	0.09	5.35	0.17	5.35	0.17
	Private/Rental	4.06	0.08	4.06	0.08	6.51	0.26	6.51	0.26
	Shore	3.94	0.12	3.94	0.12	7.32	0.44	7.32	0.44
Food	Party Charter	12.50	1.98	14.00	2.02	22.49	8.69 *	28.91	9.93 *
	Private/Rental	10.25	1.16	27.78	2.52	13.34	3.60	16.20	3.97
	Shore	11.33	4.13	15.11	5.33	6.60	2.20 *	6.60	2.20 *
Lodging	Party Charter	.	.	.	.	4.40	4.40 *	39.60	.
	Private/Rental	.	.	.	.	.	.	.	.
	Shore	.	.	.	.	.	.	.	.
Public Transportation	Party Charter	0.49	0.36	7.35	2.45 *	.	.	.	.
	Private/Rental	0.51	0.30	14.70	2.83	.	.	.	.
	Shore	0.13	0.13	4.90	.	.	.	.	.
Boat Fuel	Private/Rental	12.76	1.60	17.15	1.86	15.40	4.54	20.53	5.28
Party/Charter Fee	Party Charter	39.21	17.58	64.59	27.50	6.70	4.47	33.50	1.50 *
Access/Boat Launching	Party Charter	0.13	0.13	4.00	.	.	.	.	.
	Private/Rental	2.38	1.44	51.25	20.65 *	1.22	1.44	7.33	3.84 *
	Shore	0.22	0.16	4.00	1.00 *	.	.	.	.
Equipment Rental	Party Charter	3.00	0.95	9.00	1.63	2.20	0.95	5.50	0.50 *
	Private/Rental	0.58	0.58	50.00	.	.	.	.	.
	Shore	.	.	.	.	.	.	.	.
Bait	Party Charter	0.34	0.34	9.80	.	.	.	.	.
	Private/Rental	5.81	0.83	9.09	1.07	4.35	0.83	8.21	1.89 *
	Shore	4.98	0.77	7.27	0.75	5.28	0.77 *	7.92	5.28 *
Ice	Party Charter	1.08	0.67	5.39	2.90 *	0.49	0.67 *	2.20	0.44 *
	Private/Rental	1.11	0.24	3.68	0.51	1.52	0.24	3.41	0.89 *
	Shore	0.56	0.29	3.43	1.28 *	.	.	.	.
Total	Party Charter	60.45	17.73	117.83	27.88	41.63	10.78	115.06	10.06
	Private/Rental	37.47	2.68	177.71	21.11	42.34	6.04	62.19	7.93
	Shore	21.17	4.22	38.65	5.62	19.20	2.37	21.84	5.74
Wave Expenditures**		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		88.74	16.25	157.54	23.59	38.22	15.78	54.92	20.55
Other Tackle		34.78	4.95	55.60	6.10	14.81	4.70	24.99	7.33
Camping Equipment		9.58	3.69	126.06	32.17				
Binoculars		3.12	1.07	64.02	14.75				
Clothing		10.47	2.92	82.11	15.66				
Processing/Taxidermy		0.13	0.08	17.16	11.80 *				
Magazines		5.95	0.81	21.26	1.61				
Club Dues		7.57	1.89	48.70	9.42				
Miscellaneous		3.69	1.21	60.75	12.41				
Total		164.03	17.82	633.20	49.76	53.03	16.46	79.91	21.82
Annual Expenditures		All (\$)		Spenders (\$)					
Boat Expenses		22.77	6.26	733.32	162.37				
Power Boat Purchase		882.32	569.27	6,667.98	3,831.59				
Non-Power Boat Purchase		3.65	2.24	423.24	74.38 *				
Electronics		10.78	3.82	212.15	37.02				
Fishing Vehicle		41.00	23.19	6,000.39	4,026.86 *				
Vacation Home		1.44	1.04	734.87	530.77 *				
Total		961.95	569.80	14,771.95	5,586.74				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk, only one observation was available.

** average expenditure across the previous 2 month wave of data collection.

Connecticut

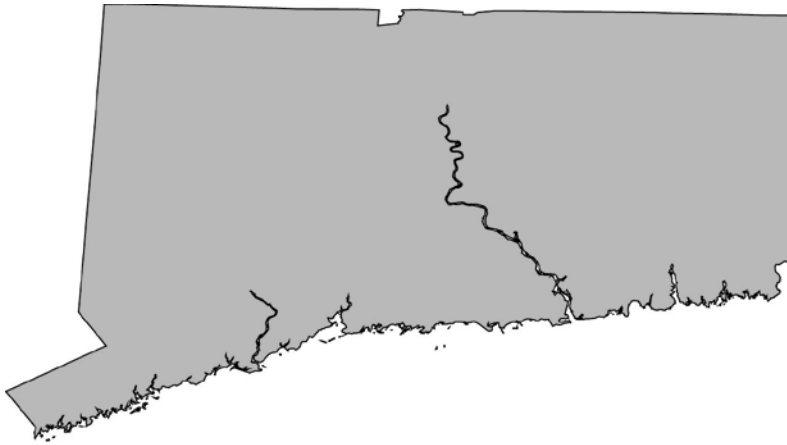


Table 7. Connecticut Total Expenditures by Resident Status, 1998 (in thousands of dollars).

CONNECTICUT		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures		Residents			Non-Residents		
Private Transportation	Party Charter	86	141	32	38	64	12
	Private/Rental	2,573	3,501	1,646	678	945	411
	Shore	1,899	2,665	1,133	321	488	154
Food	Party Charter	292	494	89	525	681	368
	Private/Rental	6,488	9,210	3,765	8,445	9,344	7,546
	Shore	5,457	9,849	1,065	3,178	3,412	2,944
Lodging	Party Charter	0	0	0	103	164	41
	Private/Rental	0	0	0	0	0	0
	Shore	0	0	0	0	0	0
Public Transportation	Party Charter	11	29	0	0	0	0
	Private/Rental	321	705	0	0	0	0
	Shore	64	189	0	0	0	0
Boat Fuel	Private/Rental	8,080	11,574	4,586	1,604	2,704	505
Party/Charter Fee	Party Charter	915	1,869	0	48	280	0
Access/Boat Launching	Party Charter	3	9	0	0	0	0
	Private/Rental	1,509	3,346	0	127	419	0
	Shore	104	254	0	0	0	0
Equipment Rental	Party Charter	70	130	10	16	32	0
	Private/Rental	368	1,090	0	0	0	0
	Shore	0	0	0	0	0	0
Bait	Party Charter	8	23	0	0	0	0
	Private/Rental	3,680	5,342	2,017	453	694	212
	Shore	2,400	3,594	1,206	231	365	97
Ice	Party Charter	25	58	0	3	13	0
	Private/Rental	703	1,088	319	158	235	80
	Shore	268	552	0	0	0	0
Total	Party Charter	1,411	2,390	470	732	1,021	555
	Private/Rental	23,723	28,960	18,633	11,465	12,961	9,993
	Shore	10,191	14,819	5,567	3,730	4,047	3,412
Equipment and Durable Expenditures		Residents			Non-Residents		
Rods and Reels		36,709	54,954	18,465	5,287	9,138	1,435
Other Tackle		15,676	22,535	8,817	1,957	3,039	875
Camping Equipment		6,205	11,799	611			
Binoculars		2,100	470	3,730			
Clothing		4,526	7,092	1,961			
Processing/Taxidermy		54	134	0			
Magazines		2,645	3,762	1,528			
Club Dues		3,763	6,064	1,461			
Miscellaneous		1,743	3,006	480			
Boat Expenses		6,605	10,547	2,664			
Power Boat Purchase		255,966	583,828	0			
Non-Power Boat Purchase		1,058	2,348	0			
Electronics		3,127	5,433	822			
Fishing Vehicle		11,895	25,338	0			
Vacation Home		416	1,014	0			
All Sub-Totals		387,813	716,714	58,912	23,170	27,463	18,878
State Total		410,983	739,912	82,054			

Table 8. Delaware Expenditures by Mode and Resident Status, 1998.

DELAWARE		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	2.10	0.09	2.10	0.09	2.95	0.06	2.95	0.06
	Private/Rental	3.12	0.09	3.12	0.09	5.09	0.13	5.09	0.13
	Shore	4.13	0.19	4.13	0.19	6.15	0.23	6.15	0.23
Food	Party Charter	13.29	1.69	16.11	1.88	19.26	1.82	23.26	2.03
	Private/Rental	9.58	0.70	11.60	0.76	16.50	1.49	19.03	1.57
	Shore	9.19	1.01	11.75	1.13	19.72	2.64	21.08	2.74
Lodging	Party Charter	1.61	1.06	44.44	18.19 *	7.53	1.56	43.08	5.22
	Private/Rental	.	.	.	.	5.19	1.67	50.18	8.76
	Shore	0.54	0.31	18.33	1.86 *	18.33	5.84	71.17	17.42
Public Transportation	Party Charter	.	.	.	.	1.01	.	16.72	3.76
	Private/Rental	0.64	0.22	11.58	2.22	1.48	0.22	19.56	4.41 *
	Shore	0.27	0.13	5.49	1.30 *	.	.	.	.
Boat Fuel	Private/Rental	12.29	1.10	16.88	1.32	11.27	1.08	15.07	1.19
Party/Charter Fee	Party Charter	23.33	2.36	37.06	2.01	6.70	17.58	79.61	10.09
Access/Boat Launching	Party Charter	0.82	0.54	22.33	8.97 *	0.24	0.54	20.00	15.00 *
	Private/Rental	1.07	0.38	13.25	3.54	1.50	0.38	6.66	1.19
	Shore	0.15	0.07	3.75	0.48 *	0.63	0.07	4.23	0.76
Equipment Rental	Party Charter	2.28	0.78	11.56	3.05 *	2.30	0.78	11.55	2.74
	Private/Rental	.	.	.	.	0.08	.	10.00	.
	Shore	0.02	0.02	2.00	.	0.75	0.02	50.00	.
Bait	Party Charter	3.09	1.41	17.64	7.00	0.42	1.41	9.93	3.35 *
	Private/Rental	9.84	0.61	11.58	0.63	9.05	0.61	10.67	0.87
	Shore	6.13	0.60	8.38	0.65	6.26	0.60	7.65	0.94
Ice	Party Charter	1.05	0.39	3.66	1.23	0.82	0.39	3.28	0.40
	Private/Rental	2.08	0.66	5.06	1.55	2.05	0.66	3.77	1.23
	Shore	1.01	0.17	2.69	0.28	2.24	0.17	5.11	2.29
Total	Party Charter	47.57	3.55	154.90	21.88	41.24	17.83	210.39	19.78
	Private/Rental	38.62	1.65	73.07	4.75	52.22	2.68	140.03	10.19
	Shore	21.44	1.25	56.52	2.68	54.08	6.44	165.39	17.82
Wave Expenditure**		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		58.58	10.02	139.29	20.17	28.91	4.44	65.98	8.28
Other Tackle		24.69	3.21	44.90	4.95	13.96	3.02	25.94	5.30
Camping Equipment		1.00	0.55	38.72	15.29				
Binoculars		1.50	0.57	50.42	5.84				
Clothing		7.23	2.13	109.58	20.43				
Processing/Taxidermy		1.87	1.58	131.18	82.75 *				
Magazines		3.61	0.59	21.63	1.66				
Club Dues		2.59	0.66	31.12	4.49				
Miscellaneous		3.34	1.47	69.03	24.18				
Total		104.40	11.01	635.86	92.58	42.87	5.37	91.92	9.83
Annual Expenditures		All (\$)		Spenders (\$)					
Boat Expenses		28.47	4.92	445.58	51.70				
Power Boat Purchase		1,044.53	414.43	5,295.64	1,777.53				
Non-Power Boat Purchase		0.55	0.24	139.35	47.65 *				
Electronics		19.60	5.54	222.32	38.68				
Fishing Vehicle		476.79	353.82	20,634.18	2,911.55				
Vacation Home		6.30	5.43	380.28	29.75 *				
Total		1,576.23	545.00	27,117.36	3,412.34				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk only one observation was available.

** average expenditure across the previous 2 month wave of data collection.



Delaware

Table 9. Delaware Total Expenditures by Resident Status, 1998 (in thousands of dollars).

DELAWARE		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures		Residents			Non-Residents		
Trip Expenditures	Mode						
Private Transportation	Party Charter	23	33	13	60	88	32
	Private/Rental	778	941	615	843	1,047	638
	Shore	951	1,221	681	1,441	1,969	912
Food	Party Charter	144	215	73	208	403	13
	Private/Rental	2,389	2,980	1,798	4,116	4,922	3,310
	Shore	2,117	2,844	1,389	4,540	6,585	2,494
Lodging	Party Charter	17	41	0	81	174	0
	Private/Rental	0	0	0	1,295	1,870	720
	Shore	125	270	0	4,221	7,278	1,164
Public Transportation	Party Charter	0	0	0	20	30	11
	Private/Rental	160	272	47	245	337	153
	Shore	62	123	1	0	0	0
Boat Fuel	Private/Rental	3,067	3,885	2,248	1,865	2,428	1,302
Party/Charter Fee	Party Charter	252	371	134	979	1,447	511
Access/Boat Launching	Party Charter	9	21	0	5	26	0
	Private/Rental	267	459	75	248	383	113
	Shore	34	68	0	148	211	85
Equipment Rental	Party Charter	25	44	5	46	83	9
	Private/Rental	0	0	0	14	17	11
	Shore	5	13	0	175	238	111
Bait	Party Charter	33	66	1	8	63	0
	Private/Rental	2,454	3,032	1,875	1,498	1,904	1,092
	Shore	1,411	1,876	946	1,467	2,060	874
Ice	Party Charter	11	21	2	16	33	0
	Private/Rental	518	856	181	339	566	112
	Shore	232	329	135	526	729	323
Total	Party Charter	514	661	369	1,425	1,946	909
	Private/Rental	9,632	10,874	8,390	10,462	11,720	9,204
	Shore	4,936	5,860	4,015	12,517	16,287	8,748
Equipment and Durable Expenditures							
Rods and Reels		11,068	16,619	5,517	6,535	8,781	4,290
Other Tackle		4,448	5,836	3,060	3,008	4,154	1,863
Camping Equipment		191	342	39			
Binoculars		177	296	58			
Clothing		747	1,195	299			
Processing/Taxidermy		154	407	0			
Magazines		561	835	288			
Club Dues		479	859	99			
Miscellaneous		1,006	2,138	0			
Boat Expenses		2,928	4,043	1,813			
Power Boat Purchase		107,431	192,767	22,095			
Non-Power Boat Purchase		57	105	8			
Electronics		2,015	3,182	848			
Fishing Vehicle		49,038	120,600	0			
Vacation Home		648	1,744	0			
All Sub-Totals		196,030	307,583	84,477	33,948	38,683	29,213
State Total		229,978	341,632	118,325			

Table 10. Maine Average Expenditures by Mode and Resident Status, 1998.

MAINE		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	3.64	0.37	3.64	0.37	1.97	0.15	1.97	0.15
	Private/Rental	3.21	0.14	3.21	0.14	2.88	0.28	2.88	0.28
	Shore	4.23	0.25	4.23	0.25	4.42	0.48	4.42	0.48
Food	Party Charter	16.79	6.91	21.36	8.31	17.75	2.37	19.97	2.45
	Private/Rental	10.82	0.92	12.83	0.98	11.97	2.58	14.81	2.87
	Shore	9.21	1.58	14.33	2.00	25.27	3.61	26.67	3.52
Lodging	Party Charter	.	.	.	.	13.64	3.83	45.80	7.78
	Private/Rental	0.70	0.47	31.67	13.64 *	10.86	5.70	73.33	19.37 *
	Shore	1.93	1.76	55.00	45.00 *	14.90	5.91	37.25	10.87 *
Public Transportation	Party Charter	.	.	.	.	0.77	0.55	17.60	4.40 *
	Private/Rental	0.51	0.25	13.88	3.48 *	1.90	1.27	18.33	8.26 *
	Shore	0.26	0.19	7.35	2.45 *	3.23	3.23	64.53	.
Boat Fuel	Private/Rental	8.27	0.76	10.79	0.85	7.69	1.93	11.54	2.48
Party/Charter Fee	Party Charter	41.79	24.94	117.00	58.81 *	34.20	6.61	69.89	8.57
Access/Boat Launching	Party Charter	.	.	.	.	1.30	1.07	20.33	14.84 *
	Private/Rental	0.96	0.40	9.29	3.25	1.20	0.44	5.14	0.77 *
	Shore	0.09	0.09	5.00	.	0.49	0.36	5.13	1.88 *
Equipment Rental	Party Charter	.	.	.	.	.	.	.	.
	Private/Rental	.	.	.	.	0.50	0.50	15.00	0.00 *
	Shore	.	.	.	.	.	.	.	.
Bait	Party Charter	0.21	0.21	2.94	.	0.66	0.30	6.34	1.02 *
	Private/Rental	2.30	0.42	7.97	0.96	1.69	0.58	4.09	1.08
	Shore	2.93	0.58	6.96	0.85	5.89	2.79	9.51	4.25
Ice	Party Charter	0.65	0.65	9.80	.	0.41	0.20	2.81	1.04 *
	Private/Rental	0.70	0.14	2.94	0.39	0.53	0.22	1.93	0.57 *
	Shore	0.30	0.15	3.33	1.01 *	1.86	1.46	5.57	4.21 *
Total	Party Charter	63.08	25.89	154.74	59.40	70.70	8.10	184.71	19.54
	Private/Rental	27.47	1.44	92.58	14.54	39.22	6.74	147.05	21.45
	Shore	18.95	2.46	96.20	45.13	56.06	8.29	153.08	13.04
Wave Expenditures**		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		63.03	8.79	109.82	13.07	21.81	8.28	48.42	17.65
Other Tackle		31.88	5.04	61.88	8.30	16.54	5.33	30.58	8.76
Camping Equipment		2.91	1.00	46.98	12.81				
Binoculars		0.16	0.12	33.37	4.42 *				
Clothing		4.61	1.67	54.98	13.54				
Processing/Taxidermy		0.04	0.03	9.00	6.08 *				
Magazines		1.83	0.60	17.25	3.21				
Club Dues		1.34	0.63	26.83	10.98				
Miscellaneous		3.40	1.90	50.34	21.37				
Total		109.19	10.53	410.44	35.09	38.35	9.84	79.00	19.70
Annual Expenditures		All (\$)		Spenders (\$)					
Boat Expenses		20.79	4.73	287.90	48.72				
Power Boat Purchase		323.43	121.67	2,393.50	938.98				
Non-Power Boat Purchase		1.18	1.17	899.96	488.00 *				
Electronics		13.77	5.06	142.38	28.91				
Fishing Vehicle		31.49	21.98	8,180.57	3,990.28 *				
Vacation Home		.	.	.	.
Total		390.65	123.84	11,904.31	4,128.60				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk only one observation was available.

** average expenditure across the previous 2 month wave of data collection.

Maine



Table 11. Maine Total Expenditures by Resident Status, 1998 (in thousands of dollars).

MAINE		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party Charter	5	10	0	3	7	0
	Private/Rental	656	863	449	151	217	85
	Shore	1,090	1,493	687	672	1,016	328
Food	Party Charter	22	51	0	24	62	0
	Private/Rental	2,208	2,972	1,445	2,442	2,801	2,084
	Shore	2,374	3,520	1,228	6,511	8,593	4,429
Lodging	Party Charter	0	0	0	18	48	0
	Private/Rental	143	333	0	2,218	2,832	1,603
	Shore	497	1,389	0	3,840	5,853	1,827
Public Transportation	Party Charter	0	0	0	1	3	0
	Private/Rental	103	207	0	99	146	52
	Shore	66	164	0	491	727	254
Boat Fuel	Private/Rental	1,688	2,282	1,093	402	652	151
Party/Charter Fee	Party Charter	56	137	0	51	140	0
Access/Boat Launching	Party Charter	0	0	0	2	5	0
	Private/Rental	195	366	25	63	110	15
	Shore	23	67	0	74	117	31
Equipment Rental	Party Charter	0	0	0	0	0	0
	Private/Rental	0	0	0	26	36	16
	Shore	0	0	0	0	0	0
Bait	Party Charter	0	1	0	1	2	0
	Private/Rental	470	688	252	88	143	34
	Shore	755	1,146	363	895	1,346	443
Ice	Party Charter	1	3	0	1	2	0
	Private/Rental	143	214	72	28	46	10
	Shore	77	157	0	282	421	143
Total	Party Charter	84	171	24	101	202	41
	Private/Rental	5,606	6,659	4,561	5,516	6,279	4,754
	Shore	4,882	6,444	3,508	12,764	15,728	9,799
Equipment and Durable Expenditures		Residents			Non-Residents		
Rods and Reels		11,539	16,163	6,915	2,759	4,932	586
Other Tackle		5,723	8,051	3,395	1,819	2,871	767
Camping Equipment		601	1,034	167			
Binoculars		40	102	0			
Clothing		789	1,370	209			
Processing/Taxidermy		9	23	0			
Magazines		336	570	101			
Club Dues		235	435	35			
Miscellaneous		658	1,276	41			
Boat Expenses		2,471	3,714	1,227			
Power Boat Purchase		38,446	68,055	8,837			
Non-Power Boat Purchase		140	411	0			
Electronics		1,637	2,870	403			
Fishing Vehicle		3,743	8,905	0			
Vacation Home		0	0	0			
All Sub-Totals		76,940	107,564	46,316	22,959	26,859	19,059
State Total		99,899	130,770	69,028			

Table 12. Maryland Average Expenditures by Mode and Resident Status, 1998.

MARYLAND		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	4.40	0.18	4.40	0.18	4.04	0.30	4.04	0.30
	Private/Rental	3.04	0.07	3.04	0.07	3.31	0.18	3.31	0.18
	Shore	3.30	0.13	3.30	0.13	3.13	0.23	3.13	0.23
Food	Party Charter	19.60	2.92	23.92	3.31	24.93	4.19	28.64	4.57
	Private/Rental	13.06	1.08	15.69	1.26	15.48	1.55	17.57	1.64
	Shore	13.42	1.49	17.72	1.76	27.33	4.61	30.51	4.92
Lodging	Party Charter	4.71	2.68	88.23	29.45 *	13.32	4.40	65.41	12.73
	Private/Rental	2.27	0.68	75.39	11.27	5.89	2.00	47.10	11.18
	Shore	3.28	1.45	43.96	14.80	25.30	7.38	74.42	16.18
Public Transportation	Party Charter	2.25	2.00	83.30	63.70 *	6.74	4.85	61.80	40.63 *
	Private/Rental	0.32	0.10	11.31	1.51	0.74	0.59	27.52	18.92 *
	Shore	0.37	0.27	12.56	7.46 *	.	.	.	.
Boat Fuel	Private/Rental	10.64	0.69	16.50	0.91	10.87	1.65	16.39	2.23
Party/Charter Fee	Party Charter	63.49	13.83	115.86	22.10	43.13	8.75	72.78	12.30
Access/Boat Launching	Party Charter	0.07	0.07	5.00	.	1.03	1.03	57.50	.
	Private/Rental	2.68	0.31	7.55	0.74	3.15	0.82	8.59	1.98
	Shore	0.83	0.58	15.93	10.13 *	1.26	0.70	10.94	4.64 *
Equipment Rental	Party Charter	0.31	0.12	3.32	0.61 *	1.35	0.64	9.25	3.33 *
	Private/Rental	0.36	0.18	27.83	8.89 *	1.75	0.99	39.13	15.69 *
	Shore	0.75	0.58	33.33	21.28 *	0.22	0.22	11.67	.
Bait	Party Charter	0.93	0.43	9.66	3.04 *	1.02	0.50	11.26	2.99 *
	Private/Rental	7.26	0.44	12.30	0.57	6.16	0.79	9.76	1.03
	Shore	7.17	0.82	9.47	0.98	5.25	0.96	6.87	1.14
Ice	Party Charter	0.62	0.16	2.37	0.38	3.42	2.44	10.07	7.04
	Private/Rental	4.97	1.06	10.48	2.18	4.31	1.81	9.96	4.07
	Shore	6.71	2.31	17.84	5.85	1.29	0.43	3.72	1.02
Total	Party Charter	96.38	14.53	336.06	73.72	98.98	12.03	320.75	45.33
	Private/Rental	44.60	1.89	180.08	14.71	51.66	3.88	179.33	27.54
	Shore	35.83	3.33	154.11	29.47	63.78	8.80	141.26	17.61
Wave Expenditures**		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		59.36	8.30	140.45	17.53	31.70	5.52	66.14	9.63
Other Tackle		25.85	2.97	53.17	5.23	16.95	3.05	30.43	4.89
Camping Equipment		2.93	0.69	62.88	7.26				
Binoculars		0.87	0.38	60.47	16.13				
Clothing		4.68	0.89	61.28	6.42				
Processing/Taxidermy		0.04	0.03	9.87	1.58 *				
Magazines		3.15	0.47	20.76	1.95				
Club Dues		3.47	0.72	37.92	5.88				
Miscellaneous		1.98	0.52	37.41	6.22				
Total		102.32	8.95	484.22	27.71	48.65	6.31	96.56	10.81
Annual Expenditures		All (\$)		Spenders (\$)					
Boat Expenses		49.40	8.15	601.18	69.46				
Power Boat Purchase		666.69	167.65	4,412.69	895.10				
Non-Power Boat Purchase		0.62	0.53	182.56	26.67 *				
Electronics		26.06	9.43	385.74	103.59				
Fishing Vehicle		226.08	150.43	6,625.01	3,539.20				
Vacation Home		22.40	16.06	1,765.57	384.11 *				
Total		991.25	226.16	13,972.76	3,673.00				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk only one observation was available.

** average expenditure across the previous 2 month wave of data collection.



Maryland

Table 13. Maryland Total Expenditures by Resident Status, 1998 (in thousands of dollars).

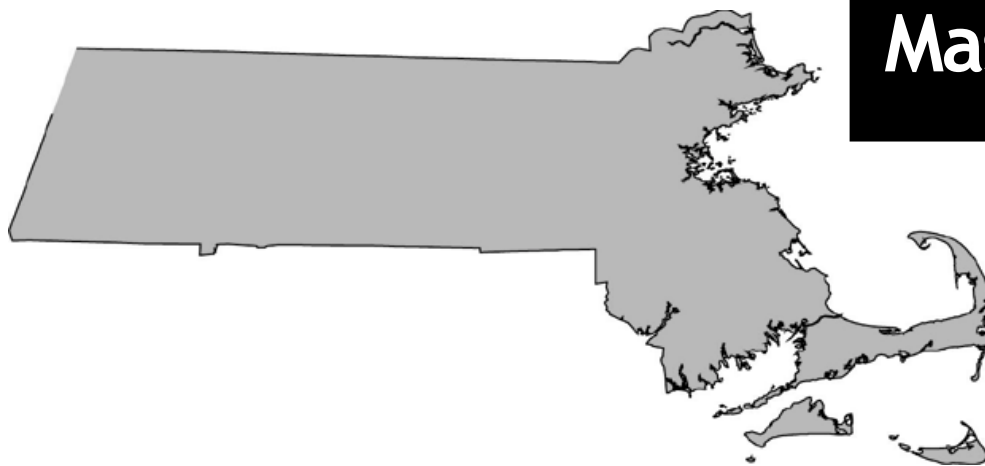
MARYLAND		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party Charter	382	483	282	289	403	176
	Private/Rental	3,889	4,539	3,239	846	1,050	642
	Shore	2,628	3,232	2,025	993	1,307	678
Food	Party Charter	1,703	2,356	1,050	2,167	3,038	1,296
	Private/Rental	16,725	20,541	12,909	19,820	20,973	18,667
	Shore	10,678	13,941	7,415	21,746	25,489	18,003
Lodging	Party Charter	409	873	0	1,158	1,858	459
	Private/Rental	2,913	4,685	1,141	7,540	8,588	6,491
	Shore	2,610	4,931	289	20,130	25,201	15,059
Public Transportation	Party Charter	196	537	0	483	811	156
	Private/Rental	406	654	157	188	251	125
	Shore	298	718	0	0	0	0
Boat Fuel	Private/Rental	13,624	16,419	10,829	2,776	3,795	1,757
Party/Charter Fee	Party Charter	5,518	8,235	2,802	3,090	5,306	874
Access/Boat Launching	Party Charter	6	17	0	74	102	45
	Private/Rental	3,435	4,393	2,477	803	1,037	569
	Shore	662	1,572	0	400	775	26
Equipment Rental	Party Charter	27	49	5	96	136	57
	Private/Rental	461	917	5	446	578	314
	Shore	594	1,500	0	71	428	0
Bait	Party Charter	81	156	5	73	139	8
	Private/Rental	9,296	11,153	7,439	1,572	1,978	1,166
	Shore	5,706	7,479	3,933	1,667	2,358	977
Ice	Party Charter	54	83	24	245	337	153
	Private/Rental	6,364	9,202	3,525	1,100	1,677	522
	Shore	5,335	9,097	1,574	409	1,836	0
Total	Party Charter	8,376	11,232	5,542	7,676	10,185	5,168
	Private/Rental	57,112	63,327	50,897	35,091	37,112	33,070
	Shore	28,512	34,472	22,632	45,417	51,944	39,043
Equipment and Durable Expenditures		Residents			Non-Residents		
Rods and Reels		54,517	73,171	35,862	15,128	21,626	8,630
Other Tackle		21,463	27,036	15,891	7,374	10,693	4,055
Camping Equipment		2,783	4,284	1,282			
Binoculars		711	1,314	108			
Clothing		3,687	5,251	2,123			
Processing/Taxidermy		55	133	0			
Magazines		2,338	3,060	1,616			
Club Dues		2,767	3,781	1,754			
Miscellaneous		1,916	3,106	726			
Boat Expenses		22,352	30,172	14,532			
Power Boat Purchase		301,667	455,516	147,817			
Non-Power Boat Purchase		282	750	0			
Electronics		11,790	20,287	3,293			
Fishing Vehicle		102,300	236,110	0			
Vacation Home		10,137	24,411	0			
All Sub-Totals		632,764	838,632	426,896	110,685	120,992	100,379
State Total		743,450	949,575	537,324			

Table 14. Massachusetts Average Expenditures by Mode and Resident Status, 1998.

MASSACHUSETTS		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	3.98	0.12	3.98	0.12	6.00	0.27	6.00	0.27
	Private/Rental	3.24	0.07	3.24	0.07	3.18	0.17	3.18	0.17
	Shore	3.81	0.09	3.81	0.09	4.33	0.25	4.33	0.25
Food	Party Charter	15.48	2.48	18.78	2.84	16.53	3.50	20.34	3.95
	Private/Rental	12.40	0.95	15.59	1.08	11.71	1.63	15.46	1.86
	Shore	14.89	2.06	23.21	2.96	15.80	3.02	22.63	3.81
Lodging	Party Charter	2.35	1.48	44.13	20.09 *	13.18	4.44	52.73	7.16 *
	Private/Rental	1.52	0.79	48.92	19.93 *	3.28	2.19	73.17	31.42 *
	Shore	4.92	1.55	61.68	12.34	12.00	5.38	53.02	20.18
Public Transportation	Party Charter	0.85	0.55	12.74	6.71 *	0.14	0.14	4.40	.
	Private/Rental	0.17	0.10	14.70	2.83 *	1.86	0.87	26.11	5.15 *
	Shore	0.26	0.15	10.05	3.72 *	10.12	4.93	73.74	26.32 *
Boat Fuel	Private/Rental	13.93	1.08	17.82	1.25	9.68	1.99	14.85	2.77
Party/Charter Fee	Party Charter	42.15	9.71	77.98	15.97	41.42	7.90	60.25	8.94
Access/Boat Launching	Party Charter	0.69	0.36	8.64	3.18 *	0.73	0.39	6.00	1.68 *
	Private/Rental	4.33	0.92	11.48	2.26	2.35	0.49	6.00	0.89
	Shore	0.28	0.13	7.57	2.20 *	0.42	0.30	7.33	4.10 *
Equipment Rental	Party Charter	1.15	0.66	14.17	6.38 *	4.06	3.08	44.67	27.69 *
	Private/Rental	0.28	0.14	12.29	3.65 *	0.17	0.17	12.00	.
	Shore	0.04	0.03	4.00	1.00 *	1.19	0.68	21.11	2.00 *
Bait	Party Charter	1.55	0.74	14.53	5.21 *	2.77	1.27	11.09	3.90 *
	Private/Rental	5.74	0.55	10.13	0.79	4.96	0.74	8.26	0.93
	Shore	4.29	0.41	7.99	0.55	4.83	0.85	8.53	1.10
Ice	Party Charter	0.70	0.19	3.03	0.56	3.66	2.74	10.65	7.77
	Private/Rental	1.11	0.15	3.88	0.36	1.27	0.28	4.18	0.54
	Shore	0.55	0.10	2.54	0.29	1.07	0.30	3.34	0.67
Total	Party Charter	68.90	10.20	197.98	28.11	88.49	10.64	216.13	31.50
	Private/Rental	42.71	1.97	138.05	20.67	38.47	3.62	163.21	32.04
	Shore	29.04	2.62	120.85	13.46	49.76	7.99	194.03	33.72
Wave Expenditures**		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		73.72	8.96	136.27	14.85	49.06	12.60	100.98	21.79
Other Tackle		33.05	4.23	57.57	6.52	16.39	2.49	32.87	3.84
Camping Equipment		6.95	1.89	92.08	16.36				
Binoculars		1.68	0.53	70.45	10.12				
Clothing		7.57	1.67	71.37	12.02				
Processing/Taxidermy		0.41	0.24	72.95	25.31 *				
Magazines		3.21	0.40	19.22	1.42				
Club Dues		3.80	0.74	39.27	4.38				
Miscellaneous		2.94	0.98	79.83	23.44				
Total		133.32	10.32	639.01	44.60	65.45	12.84	133.85	22.13
Annual Expenditures		All (\$)		Spenders (\$)					
Boat Expenses		10.66	1.87	511.59	82.48				
Power Boat Purchase		888.09	263.93	5,847.20	1,391.00				
Non-Power Boat Purchase		6.56	3.75	248.19	68.36				
Electronics		15.30	5.65	266.74	66.45				
Fishing Vehicle		425.19	193.47	7,020.73	2,373.82				
Vacation Home		0.80	0.67	944.13	342.85				
Total		1,346.60	327.32	14,838.59	2,775.49				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk only one observation was available.

** average expenditure across the previous 2 month wave of data collection.



Massachusetts

Table 15. Massachusetts Total Expenditures by Resident Status, 1998 (in thousands of dollars).

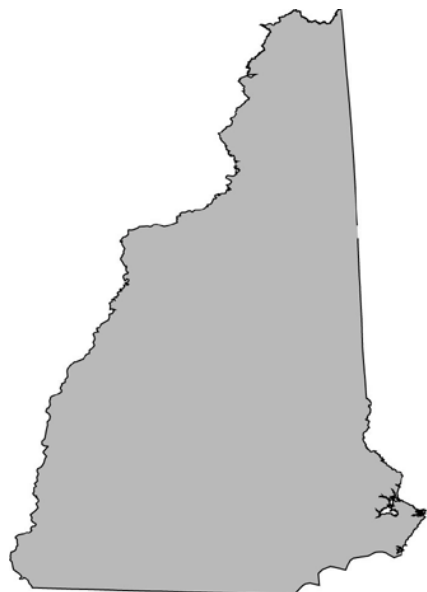
MASSACHUSETTS		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party Charter	368	504	233	292	438	147
	Private/Rental	4,611	5,484	3,738	1,048	1,299	798
	Shore	4,478	5,410	3,545	1,542	1,965	1,119
Food	Party Charter	1,431	2,112	750	1,528	2,039	1,017
	Private/Rental	17,616	21,803	13,430	16,644	17,978	15,309
	Shore	17,491	23,404	11,579	18,554	21,076	16,032
Lodging	Party Charter	218	493	0	1,219	1,736	701
	Private/Rental	2,164	4,384	0	4,655	6,082	3,229
	Shore	5,780	9,518	2,041	14,098	17,975	10,221
Public Transportation	Party Charter	79	180	0	7	57	0
	Private/Rental	243	529	0	615	762	467
	Shore	309	648	0	3,603	4,514	2,692
Boat Fuel	Private/Rental	19,789	24,517	15,061	3,192	4,643	1,740
Party/Charter Fee	Party Charter	3,897	6,129	1,665	2,019	3,356	683
Access/Boat Launching	Party Charter	64	132	0	35	73	0
	Private/Rental	6,158	8,951	3,364	773	1,386	160
	Shore	326	625	27	148	244	52
Equipment Rental	Party Charter	106	229	0	198	312	84
	Private/Rental	403	793	13	56	146	0
	Shore	49	120	0	425	534	316
Bait	Party Charter	143	285	2	135	230	40
	Private/Rental	8,156	10,298	6,013	1,634	2,131	1,137
	Shore	5,035	6,428	3,642	1,719	2,237	1,201
Ice	Party Charter	64	106	23	179	268	89
	Private/Rental	1,574	2,082	1,066	420	551	288
	Shore	643	902	384	381	498	264
Total	Party Charter	6,371	8,736	4,014	5,612	7,152	4,073
	Private/Rental	60,713	68,359	53,085	29,037	31,617	26,458
	Shore	34,111	41,323	26,900	40,471	45,235	35,706
Equipment and Durable Expenditures		Residents			Non-Residents		
Rods and Reels		73,339	94,773	51,904	24,943	43,857	6,028
Other Tackle		33,438	43,756	23,121	6,443	8,555	4,331
Camping Equipment		6,520	10,636	2,403			
Binoculars		1,612	2,696	528			
Clothing		6,814	10,312	3,317			
Processing/Taxidermy		211	475	0			
Magazines		3,265	4,197	2,332			
Club Dues		3,616	5,202	2,029			
Miscellaneous		2,672	4,550	794			
Boat Expenses		4,340	5,941	2,739			
Power Boat Purchase		361,455	577,013	145,897			
Non-Power Boat Purchase		2,672	5,677	0			
Electronics		6,228	10,800	1,655			
Fishing Vehicle		173,055	328,768	17,341			
Vacation Home		324	858	0			
All Sub-Totals		780,755	1,048,082	513,427	106,505	126,354	86,657
State Total		887,260	1,155,324	619,197			

Table 16. New Hampshire Average Expenditures by Mode and Resident Status, 1998.

NEW HAMPSHIRE		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	3.81	0.15	3.81	0.15	1.36	0.15	1.36	0.15
	Private/Rental	3.43	0.12	3.43	0.12	2.03	0.30	2.03	0.30
	Shore	3.70	0.19	3.70	0.19	0.78	0.11	0.78	0.11
Food	Party Charter	15.08	2.74	18.85	3.13	13.41	2.26	15.92	2.44
	Private/Rental	13.33	2.28	16.12	2.56	15.09	5.89	18.10	6.70
	Shore	13.76	3.53	19.11	4.29	20.10	6.76	26.12	7.85
Lodging	Party Charter	.	.	.	.	2.93	2.54	61.60	44.00 *
	Private/Rental	.	.	.	.	.	.	.	.
	Shore	.	.	.	.	19.49	7.53	34.10	10.64 *
Public Transportation	Party Charter	.	.	.	.	.	.	.	.
	Private/Rental	0.48	0.33	8.49	4.01 *	.	.	.	.
	Shore	0.00	0.00	0.00	0.00	.	.	.	.
Boat Fuel	Private/Rental	12.42	2.15	18.28	2.65	10.26	3.27	14.81	3.84 *
Party/Charter Fee	Party Charter	23.47	4.07	44.00	4.49	17.88	2.65	30.76	2.16
Access/Boat Launching	Party Charter	0.76	0.76	35.00	0.00 *	0.35	0.35	15.00	0.00 *
	Private/Rental	2.17	0.52	7.80	0.78	1.46	0.72	4.75	1.25 *
	Shore	.	.	.	.	.	.	.	.
Equipment Rental	Party Charter	1.90	0.52	5.46	1.00	1.75	0.44	5.00	0.62
	Private/Rental	0.28	0.28	15.00	.	.	.	.	.
	Shore	.	.	.	.	0.53	0.53	8.00	.
Bait	Party Charter	1.54	0.91	9.89	5.01 *	0.16	0.12	3.08	1.32 *
	Private/Rental	3.97	0.85	10.22	1.32	6.53	1.62	8.49	1.64
	Shore	6.78	1.28	9.28	1.36	3.28	1.28	6.14	1.91 *
Ice	Party Charter	0.55	0.27	3.14	1.26 *	0.17	0.11	2.35	1.06 *
	Private/Rental	1.15	0.27	3.20	0.45	0.88	0.35	2.29	0.35 *
	Shore	0.52	0.27	2.61	0.94 *	1.73	0.83	5.19	1.64 *
Total	Party Charter	47.11	5.08	120.15	7.59	38.01	4.35	135.07	44.16
	Private/Rental	37.22	3.32	82.54	5.67	36.24	6.99	50.48	8.01
	Shore	24.76	3.77	34.70	4.60	45.91	10.25	80.33	13.46
Wave Expenditures**		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		65.29	17.08	162.01	33.34	67.69	16.83	95.00	18.62
Other Tackle		24.65	5.17	43.36	7.68	22.74	5.93	31.22	6.77
Camping Equipment		1.77	0.61	31.83	4.97				
Binoculars		2.96	1.49	81.83	18.05 *				
Clothing		5.23	1.42	47.56	7.43				
Processing/Taxidermy		0.44	0.34	37.33	4.92 *				
Magazines		1.94	0.50	16.07	2.13				
Club Dues		3.07	0.99	35.01	7.08				
Miscellaneous		1.15	0.48	26.12	5.10				
Total		106.51	18.02	481.11	41.00	90.44	17.84	126.22	19.81
Annual Expenditures		All (\$)		Spenders (\$)					
Boat Expenses		17.00	6.04	656.49	172.82				
Power Boat Purchase		124.80	38.68	1,358.68	433.06				
Non-Power Boat Purchase		4.02	3.40	126.41	78.28 *				
Electronics		7.47	3.61	222.76	28.01				
Fishing Vehicle		436.99	229.79	6,929.95	2,456.93 *				
Vacation Home		.	.	.	.
Total		590.28	233.15	9,294.29	2,502.17				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk only one observation was available.

** average expenditure across the previous 2 month wave of data



New Hampshire

Table 17. New Hampshire Total Expenditures by Resident Status, 1998 (in thousands of dollars).

NEW HAMPSHIRE		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party Charter	51	74	29	21	34	9
	Private/Rental	341	469	213	39	59	19
	Shore	224	319	130	49	81	18
Food	Party Charter	203	315	90	180	312	48
	Private/Rental	1,323	1,977	669	1,497	1,749	1,246
	Shore	835	1,370	300	1,220	2,308	131
Lodging	Party Charter	0	0	0	39	119	0
	Private/Rental	0	0	0	0	0	0
	Shore	0	0	0	1,183	2,328	38
Public Transportation	Party Charter	0	0	0	0	0	0
	Private/Rental	48	113	0	0	0	0
	Shore	0	0	0	0	0	0
Boat Fuel	Private/Rental	1,232	1,845	620	198	346	49
	Party/Charter Fee	315	487	144	282	476	88
	Access/Boat Launching	10	30	0	5	28	0
Equipment Rental	Private/Rental	215	343	87	28	51	5
	Shore	0	0	0	0	0	0
	Party Charter	25	43	8	28	49	6
Bait	Private/Rental	28	82	0	0	0	0
	Shore	0	0	0	34	53	15
	Party Charter	21	46	0	2	29	0
Ice	Private/Rental	395	613	176	126	189	62
	Shore	412	637	186	209	403	15
	Party Charter	7	15	0	3	11	0
Total	Private/Rental	114	180	48	17	29	5
	Shore	32	66	0	110	181	39
	Party Charter	633	842	424	561	812	321
Equipment and Durable Expenditures	Private/Rental	3,695	4,641	2,751	1,905	2,206	1,604
	Shore	1,503	2,092	914	2,805	4,399	1,211
	Party Charter	633	842	424	561	812	321
Equipment and Durable Expenditures		Residents			Non-Residents		
Rods and Reels		4,435	6,553	2,316	5,010	7,874	2,147
Other Tackle		1,262	1,759	766	1,615	2,584	647
Camping Equipment		322	558	87			
Binoculars		288	642	0			
Clothing		720	1,188	252			
Processing/Taxidermy		78	181	0			
Magazines		308	501	115			
Club Dues		387	676	98			
Miscellaneous		111	214	9			
Boat Expenses		5,104	7,394	2,813			
Power Boat Purchase		27,249	42,969	11,529			
Non-Power Boat Purchase		169	375	0			
Electronics		1,354	2,126	583			
Fishing Vehicle		20,729	40,081	1,377			
Vacation Home		0	0	0			
All Sub-Totals		55,502	86,147	24,858	12,640	16,701	8,579
State Total		68,142	99,055	37,230			

Table 18. New Jersey Average Expenditures by Mode and Resident Status, 1998.

NEW JERSEY		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	4.24	0.14	4.24	0.14	5.78	0.12	5.78	0.12
	Private/Rental	3.62	0.08	3.62	0.08	5.98	0.12	5.98	0.12
	Shore	4.75	0.15	4.75	0.15	7.18	0.34	7.18	0.34
Food	Party Charter	14.40	1.40	18.33	1.56	14.05	1.73	16.14	1.87
	Private/Rental	21.41	1.34	26.24	1.51	17.16	1.63	20.17	1.77
	Shore	16.12	1.44	21.70	1.68	16.90	3.34	20.48	3.76
Lodging	Party Charter	3.87	1.61	82.53	10.60 *	8.27	2.63	51.41	10.64
	Private/Rental	0.32	0.26	59.38	34.38 *	4.63	1.37	41.36	7.17
	Shore	2.76	1.23	80.00	17.08 *	4.49	2.66	61.39	13.51 *
Public Transportation	Party Charter	0.93	0.30	10.87	1.72	1.64	0.78	24.00	7.02 *
	Private/Rental	0.48	0.14	13.80	1.69	0.42	0.22	14.30	3.30 *
	Shore	0.22	0.15	13.07	5.89 *	.	.	.	.
Boat Fuel	Private/Rental	15.71	1.36	21.14	1.71	12.11	1.29	16.27	1.52
Party/Charter Fee	Party Charter	25.64	3.73	45.13	5.55	31.42	7.20	50.39	10.78
Access/Boat Launching Fees	Party Charter	1.18	0.56	21.67	7.09 *	0.84	0.42	14.37	3.99 *
	Private/Rental	7.41	0.94	17.15	1.91	5.69	1.18	14.77	2.63
	Shore	0.68	0.28	14.52	3.70 *	0.81	0.54	11.56	4.91 *
Equipment Rental	Party Charter	1.66	0.86	16.38	7.57	3.14	1.08	15.69	4.28
	Private/Rental	0.38	0.21	35.75	8.74 *	0.38	0.27	25.83	4.17 *
	Shore	.	.	.	.	.	.	.	.
Bait	Party Charter	3.12	0.69	12.21	1.97	3.72	0.90	13.91	2.29
	Private/Rental	9.04	0.49	11.81	0.55	7.75	0.71	9.89	0.79
	Shore	5.55	0.47	8.02	0.53	4.21	0.79	7.37	0.95
Ice	Party Charter	2.04	1.01	8.44	4.01	1.09	0.36	3.39	0.98
	Private/Rental	3.15	0.73	7.66	1.71	1.77	0.25	4.09	0.42
	Shore	1.86	0.86	5.77	2.61	0.98	0.29	3.18	0.61
Total	Party Charter	57.08	4.60	219.80	16.62	69.95	8.04	195.08	17.96
	Private/Rental	61.52	2.33	196.55	35.68	55.89	2.88	152.66	9.64
	Shore	31.94	2.16	147.83	18.71	34.57	4.40	111.16	14.90
Wave Expenditures**		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		80.50	12.55	175.52	24.01	32.40	6.54	71.80	11.57
Other Tackle		38.20	5.54	70.70	9.34	17.58	3.45	32.68	5.54
Camping Equipment		4.76	1.29	58.87	10.36				
Binoculars		2.89	1.20	123.20	20.22				
Clothing		12.20	2.05	79.06	8.67				
Processing/Taxidermy		0.40	0.21	74.51	22.72 *				
Magazines		6.18	0.89	26.67	2.53				
Club Dues		5.31	0.83	35.23	3.19				
Miscellaneous		4.32	0.89	61.40	10.09				
Total		154.76	14.07	705.16	43.47	49.99	7.39	104.49	12.83
Annual Expenditures		All (\$)		Spenders (\$)					
Boat Expenses		62.26	11.65	1,021.41	149.32				
Power Boat Purchase		373.79	62.55	2,755.56	521.72				
Non-Power Boat Purchase		0.78	0.45	223.81	50.49 *				
Electronics		16.70	3.22	368.32	57.20				
Fishing Vehicle		172.47	52.15	9,779.03	2,035.75				
Vacation Home		0.56	0.26	125.18	70.83 *				
Total		626.56	82.33	14,273.31	2,109.41				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk only one observation was available.

** average expenditure across the previous 2 month wave of data collection.



New Jersey

Table 19. New Jersey Total Expenditures by Resident Status, 1998 (in thousands of dollars).

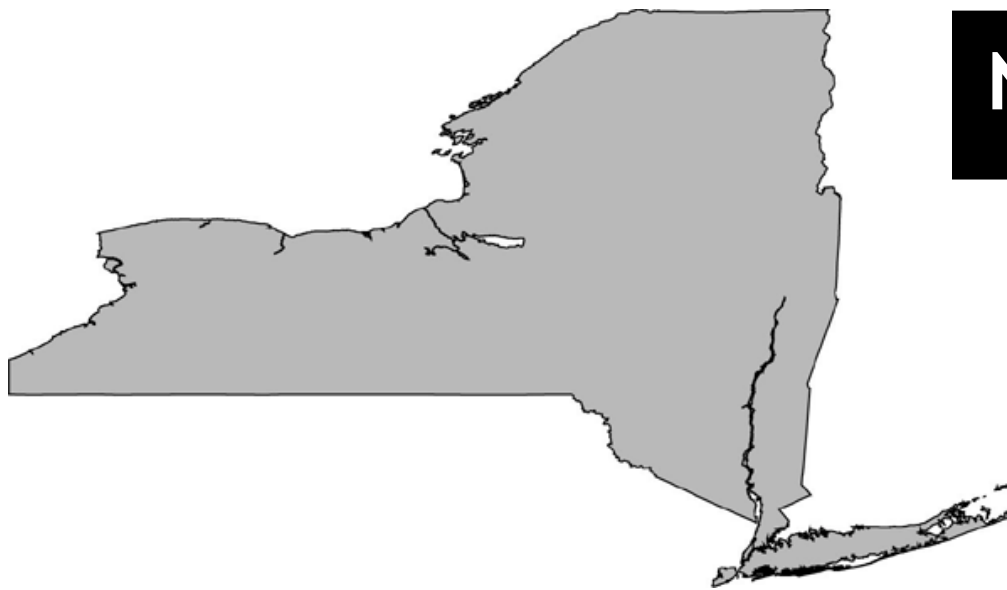
NEW JERSEY		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures		Residents			Non-Residents		
Private Transportation	Party Charter	999	1,200	799	1,269	1,575	963
	Private/Rental	7,081	8,262	5,900	4,089	4,926	3,253
	Shore	4,555	5,688	3,422	1,474	1,939	1,008
Food	Party Charter	3,391	4,302	2,480	3,308	4,347	2,269
	Private/Rental	26,529	31,906	21,151	33,512	36,717	30,308
	Shore	11,163	14,477	7,848	16,209	17,900	14,518
Lodging	Party Charter	911	1,672	150	1,948	3,150	746
	Private/Rental	627	1,632	0	9,044	10,983	7,106
	Shore	2,646	5,035	258	4,309	5,401	3,217
Public Transportation	Party Charter	218	363	73	359	514	204
	Private/Rental	939	1,505	373	288	487	89
	Shore	215	505	0	0	0	0
Boat Fuel	Private/Rental	30,685	37,869	23,501	8,290	10,681	5,898
Party/Charter Fee	Party Charter	6,036	8,102	3,971	6,893	9,178	4,608
Access/Boat Launching	Party Charter	277	541	13	183	427	0
	Private/Rental	14,478	18,751	10,205	3,893	5,368	2,419
	Shore	648	1,201	95	165	289	42
Equipment Rental	Party Charter	392	795	0	688	1,091	286
	Private/Rental	749	1,550	0	260	542	0
	Shore	0	0	0	0	0	0
Bait	Party Charter	735	1,080	390	816	1,167	465
	Private/Rental	17,654	21,073	14,234	5,301	6,554	4,049
	Shore	5,324	6,871	3,777	865	1,185	545
Ice	Party Charter	481	955	8	239	674	0
	Private/Rental	6,146	9,096	3,196	1,213	2,214	211
	Shore	1,782	3,445	119	202	550	0
Total	Party Charter	13,441	15,954	10,931	15,703	18,600	12,832
	Private/Rental	104,888	115,957	93,849	65,890	70,922	60,860
	Shore	26,333	31,183	21,486	23,224	25,347	21,120
Equipment and Durable Expenditures		Residents			Non-Residents		
Rods and Reels		75,998	101,241	50,755	15,602	21,108	10,096
Other Tackle		37,550	47,976	27,123	9,581	13,730	5,433
Camping Equipment		4,769	7,666	1,872			
Binoculars		2,438	4,705	172			
Clothing		9,138	12,508	5,768			
Processing/Taxidermy		435	898	0			
Magazines		4,778	6,166	3,391			
Club Dues		4,563	6,133	2,994			
Miscellaneous		3,828	5,502	2,154			
Boat Expenses		26,682	37,146	16,218			
Power Boat Purchase		160,174	217,241	103,107			
Non-Power Boat Purchase		333	713	0			
Electronics		7,158	10,038	4,279			
Fishing Vehicle		73,907	118,820	28,994			
Vacation Home		239	460	19			
All Sub-Totals		556,652	636,166	477,138	130,000	139,260	120,740
State Total		686,652	766,703	606,602			

Table 20. New York Average Expenditures by Mode and Resident Status, 1998.

NEW YORK		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	3.04	0.14	3.04	0.14	3.49	0.81	3.49	0.81
	Private/Rental	3.36	0.10	3.36	0.10	7.28	0.74	7.28	0.74
	Shore	3.45	0.13	3.45	0.13	6.92	1.56	6.92	1.56
Food	Party Charter	15.89	1.91	21.19	2.23	19.80	9.25 *	26.40	9.16 *
	Private/Rental	16.38	1.50	19.43	1.69	17.76	5.61	19.54	5.89 *
	Shore	9.86	1.38	14.86	1.80	11.00	4.58 *	14.67	3.88 *
Lodging	Party Charter	2.25	1.58	75.00	37.53 *	11.00	11.00 *	44.00	.
	Private/Rental	0.64	0.44	52.56	24.58 *	.	.	.	.
	Shore	1.03	1.01	54.83	51.83 *	.	.	.	.
Public Transportation	Party Charter	0.32	0.25	10.78	6.88 *	24.64	20.52 *	61.60	44.00 *
	Private/Rental	0.25	0.10	7.72	1.43 *	1.26	1.26	17.60	0.00
	Shore	0.15	0.11	5.39	2.70 *	.	.	.	.
Boat Fuel	Private/Rental	14.66	1.34	20.59	1.69	21.07	9.39	38.62	13.70 *
Party/Charter Fee	Party Charter	19.53	2.59	36.17	3.44	76.17	22.34 *	91.40	20.01 *
Access/Boat Launching	Party Charter	1.40	0.56	20.43	3.37 *	.	.	.	.
	Private/Rental	4.01	0.79	26.98	3.40	4.17	2.86	29.17	4.17 *
	Shore	.	.	.	.	.	.	.	.
Equipment Rental	Party Charter	0.48	0.33	16.00	7.81 *	.	.	.	.
	Private/Rental	0.34	0.23	28.33	11.67 *	.	.	.	.
	Shore	0.09	0.09	10.00	.	.	.	.	.
Bait	Party Charter	1.74	0.60	14.37	3.10	.	.	.	.
	Private/Rental	9.29	0.65	12.94	0.74	7.74	1.89	12.04	1.61 *
	Shore	5.44	0.94	9.28	1.40	.	.	.	.
Ice	Party Charter	0.56	0.20	4.74	1.18	.	.	.	.
	Private/Rental	1.80	0.59	7.04	2.18	1.26	0.57	4.40	0.60 *
	Shore	0.75	0.24	3.42	0.91	.	.	.	.
Total	Party Charter	45.21	3.71	201.72	39.45	135.10	33.58	226.89	49.20
	Private/Rental	50.72	2.39	178.95	27.66	60.54	11.57	128.65	15.60
	Shore	20.77	1.98	101.23	51.96	17.92	4.84	21.59	4.18
Wave Expenditures**		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		68.43	11.72	172.56	27.15	29.01	11.60	50.57	19.52
Other Tackle		40.11	9.76	92.23	20.99	26.82	8.98	36.62	11.53
Camping Equipment		4.13	1.48	92.43	14.28				
Binoculars		2.48	1.12	98.43	13.09				
Clothing		9.50	2.31	89.82	14.10				
Processing/Taxidermy		0.24	0.13	8.53	2.78 *				
Magazines		4.59	0.82	23.91	3.11				
Club Dues		3.93	1.01	40.65	6.75				
Miscellaneous		2.58	0.73	35.44	6.40				
Total		136.00	15.61	654.00	43.08	55.82	14.67	87.19	22.67
Annual Expenditures		All (\$)		Spenders (\$)					
Residents									
Boat Expenses		31.76	7.30	1,019.38	136.48				
Power Boat Purchase		569.19	208.03	4,210.11	1,338.81				
Non-Power Boat Purchase		0.74	0.53	162.82	95.56 *				
Electronics		28.98	8.55	365.36	40.54				
Fishing Vehicle		47.11	24.04	4,821.38	1,301.92				
Vacation Home		0.30	0.30	475.00	.				
Total		678.08	209.72	11,054.06	1,875.31				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk only one observation was available.

** average expenditure across the previous 2 month wave of data collection.



New York

Table 21. New York Total Expenditures by Resident Status, 1998 (in thousands of dollars).

NEW YORK		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party Charter	702	903	500	42	70	15
	Private/Rental	6,426	7,956	4,896	653	905	401
	Shore	3,906	5,127	2,684	241	402	80
Food	Party Charter	3,662	4,975	2,349	4,563	4,805	4,322
	Private/Rental	31,293	40,424	22,163	33,936	35,042	32,829
	Shore	11,150	15,689	6,612	12,445	12,805	12,085
Lodging	Party Charter	519	1,241	0	2,535	2,796	2,274
	Private/Rental	1,215	2,872	0	0	0	0
	Shore	1,170	3,404	0	0	0	0
Public Transportation	Party Charter	74	187	0	298	442	154
	Private/Rental	474	849	98	113	154	72
	Shore	173	414	0	0	0	0
Boat Fuel	Private/Rental	28,007	36,181	19,833	1,889	3,631	146
Party/Charter Fee	Party Charter	4,501	6,189	2,814	922	1,370	473
Access/Boat Launching	Party Charter	323	587	59	0	0	0
	Private/Rental	7,661	11,085	4,237	374	558	189
	Shore	0	0	0	0	0	0
Equipment Rental	Party Charter	110	261	0	0	0	0
	Private/Rental	655	1,518	0	0	0	0
	Shore	107	316	0	0	0	0
Bait	Party Charter	402	690	113	0	0	0
	Private/Rental	17,756	22,524	12,987	694	950	438
	Shore	6,160	8,936	3,384	0	0	0
Ice	Party Charter	128	225	31	0	0	0
	Private/Rental	3,445	5,772	1,118	113	221	4
	Shore	848	1,433	264	0	0	0
Total	Party Charter	10,420	12,729	8,171	8,361	8,951	7,770
	Private/Rental	96,931	110,933	82,987	37,771	39,877	35,664
	Shore	23,514	29,450	17,897	12,686	13,080	12,291
Equipment and Durable Expenditures		Residents			Non-Residents		
Rods and Reels		68,835	97,152	40,517	227	583	0
Other Tackle		40,720	62,025	19,414	516	1,024	8
Camping Equipment		3,657	6,806	508			
Binnoculars		3,000	5,778	221			
Clothing		7,190	11,438	2,942			
Processing/Taxidermy		303	638	0			
Magazines		3,967	5,696	2,238			
Club Dues		2,765	4,391	1,140			
Miscellaneous		2,917	4,748	1,085			
Boat Expenses		13,761	20,418	7,104			
Power Boat Purchase		246,588	428,097	65,079			
Non-Power Boat Purchase		320	773	0			
Electronics		12,556	20,134	4,979			
Fishing Vehicle		20,409	41,074	0			
Vacation Home		128	381	0			
All Sub-Totals		557,982	745,096	370,868	59,560	61,867	57,252
State Total		617,542	804,670	430,413			

Table 22. Rhode Island Average Expenditures by Mode and Resident Status, 1998.

RHODE ISLAND		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	2.51	0.08	2.51	0.08	1.89	0.04	1.89	0.04
	Private/Rental	2.32	0.06	2.32	0.06	2.54	0.09	2.54	0.09
	Shore	2.26	0.09	2.26	0.09	1.93	0.11	1.93	0.11
Food	Party Charter	15.68	3.99	22.40	4.65	21.40	3.30	24.21	3.58
	Private/Rental	10.09	1.13	13.17	1.27	13.95	3.25	16.16	3.65
	Shore	6.32	1.70	12.41	2.94	16.59	2.55	18.72	2.70
Lodging	Party Charter	.	.	.	.	9.14	2.97	58.96	10.26
	Private/Rental	.	.	.	.	3.06	2.34	46.93	29.33 *
	Shore	2.05	1.47	62.50	12.50 *	14.44	5.05	64.99	14.00
Public Transportation	Party Charter	.	.	.	.	0.48	0.48	35.20	.
	Private/Rental	.	.	.	.	0.19	0.19	8.80	.
	Shore	0.03	0.03	1.96	0.00 *	5.14	2.31	26.25	9.16 *
Boat Fuel	Private/Rental	14.28	1.97	18.14	2.31	12.99	2.13	17.72	2.43
Party/Charter Fee	Party Charter	54.83	20.79	80.14	27.90	55.11	10.18	80.47	13.44
Access/Boat Launching Fees	Party Charter	.	.	.	.	.	.	.	.
	Private/Rental	0.27	0.15	6.25	1.75 *	1.07	0.54	9.60	2.94 *
	Shore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Equipment Rental	Party Charter	1.90	1.06	10.00	3.54 *	3.22	1.53	17.85	7.41
	Private/Rental	.	.	.	.	0.22	0.22	10.00	.
	Shore	.	.	.	.	0.27	0.27	12.50	.
Bait	Party Charter	.	.	.	.	0.49	0.22	7.22	0.98 *
	Private/Rental	5.86	0.89	10.12	1.27	5.71	1.26	9.10	1.70
	Shore	2.47	0.43	5.58	0.55	3.25	0.58	5.23	0.70
Ice	Party Charter	0.09	0.09	1.96	.				
	Private/Rental	0.88	0.20	3.21	0.50	1.30	0.31	2.93	0.51
	Shore	0.29	0.11	2.21	0.44 *	2.39	1.95	8.97	7.19
Total	Party Charter	75.01	21.20	117.01	28.51	92.75	11.23	229.68	18.84
	Private/Rental	33.70	2.45	53.21	3.44	41.03	4.76	123.77	29.85
	Shore	13.42	2.29	86.92	12.86	44.01	6.45	138.59	18.42
Wave Expenditures **		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		62.90	14.73	108.83	22.61	43.16	10.91	77.48	17.38
Other Tackle		34.56	8.71	58.16	13.34	19.53	3.68	33.41	5.25
Camping Equipment		4.37	2.17	59.70	18.97				
Binoculars		1.60	0.75	54.84	13.53				
Clothing		12.18	4.16	88.42	16.56				
Processing/Taxidermy		0.31	0.25	40.99	22.48 *				
Magazines		3.46	1.26	19.06	5.28				
Club Dues		11.55	7.36	104.24	54.56				
Miscellaneous		2.20	1.03	41.06	9.80				
Total		133.12	19.30	575.29	71.50	62.69	11.52	110.90	18.16
Annual Expenditures		All (\$)		Spenders (\$)					
Boat Expenses		17.63	4.67	798.79	166.56				
Power Boat Purchase		601.78	301.48	5,237.39	2,647.68				
Non-Power Boat Purchase		0.35	0.24	285.60	131.13 *				
Electronics		29.79	11.96	234.03	47.18				
Fishing Vehicle		20.19	10.52	2,466.43	854.82 *				
Vacation Home		.	.	.	.
Total		669.74	301.93	3,847.38	2,790.72				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk only one observation was available.

** average expenditure across the previous 2 month wave of data collection.



Rhode Island

Table 23. Rhode Island Total Expenditures by Resident Status, 1998 (in thousands of dollars).

RHODE ISLAND		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party Charter	28	52	5	68	121	16
	Private/Rental	630	900	360	421	583	260
	Shore	756	983	529	530	716	344
Food	Party Charter	178	346	9	242	874	0
	Private/Rental	2,739	4,043	1,436	3,788	5,143	2,434
	Shore	2,108	3,367	849	5,538	7,577	3,500
Lodging	Party Charter	0	0	0	103	422	0
	Private/Rental	0	0	0	831	1,601	61
	Shore	684	1,653	0	4,821	7,813	1,829
Public Transportation	Party Charter	0	0	0	17	31	4
	Private/Rental	0	0	0	32	44	20
	Shore	11	32	0	1,413	1,884	941
Boat Fuel	Private/Rental	3,877	5,817	1,937	2,151	3,210	1,093
Party/Charter Fee	Party Charter	621	1,288	0	1,986	4,027	0
Access/Boat Launching	Party Charter	0	0	0	0	0	0
	Private/Rental	72	154	0	177	258	95
	Shore	0	0	0	0	0	0
Equipment Rental	Party Charter	22	50	0	116	229	3
	Private/Rental	0	0	0	36	50	22
	Shore	0	0	0	75	100	50
Bait	Party Charter	0	0	0	18	32	4
	Private/Rental	1,590	2,410	770	946	1,403	489
	Shore	824	1,192	456	894	1,271	518
Ice	Party Charter	1	3	0	37	66	8
	Private/Rental	239	384	94	216	319	113
	Shore	98	176	20	658	886	431
Total	Party Charter	849	1,538	205	2,588	4,752	581
	Private/Rental	9,147	11,645	6,651	8,598	10,548	6,649
	Shore	4,481	6,130	2,983	13,930	17,612	10,248
Equipment and Durable Expenditures		Residents			Non-Residents		
Rods and Reels		10,599	15,411	5,787	8,883	12,688	5,079
Other Tackle		5,343	7,452	3,233	4,779	6,816	2,742
Camping Equipment		640	1,198	83			
Binoculars		371	762	0			
Clothing		1,871	3,193	549			
Processing/Taxidermy		59	154	0			
Magazines		573	923	223			
Club Dues		1,548	3,243	0			
Miscellaneous		403	751	55			
Boat Expenses		1,687	2,657	716			
Power Boat Purchase		57,573	115,533	0			
Non-Power Boat Purchase		33	78	0			
Electronics		2,850	5,190	509			
Fishing Vehicle		1,932	3,949	0			
Vacation Home		0	0	0			
All Sub-Totals		99,958	158,373	41,543	38,779	45,155	32,402
		0	0	0	0	0	0
State Total		138,737	197,499	79,975	0	0	0

Table 24. Rhode Island Average Expenditures by Mode and Resident Status, 1998.

VIRGINIA		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party Charter	14.50	0.34	14.50	0.34	11.57	1.22	11.57	1.22
	Private/Rental	14.41	0.30	14.41	0.30	11.71	0.71	11.71	0.71
	Shore	17.51	0.56	17.51	0.56	16.35	1.18	16.35	1.18
Food	Party Charter	12.80	1.49	15.62	1.69	16.50	3.97	18.86	3.68 *
	Private/Rental	10.25	0.52	12.29	0.58	10.82	1.26	12.85	1.39
	Shore	11.01	1.09	15.34	1.34	16.00	3.35	19.05	3.62
Lodging	Party Charter	4.47	1.94	64.81	18.47 *	12.41	6.73	41.36	8.93 *
	Private/Rental	0.80	0.29	45.64	8.11	3.54	1.31	38.57	7.50 *
	Shore	2.42	0.89	51.46	8.96 *	10.24	4.31	38.03	10.56 *
Public Transportation	Party Charter	0.08	0.08	9.80	.	0.47	0.47	4.69	.
	Private/Rental	0.51	0.18	14.46	4.12	1.33	1.26	66.38	59.34 *
	Shore	0.17	0.11	8.09	4.32 *	0.49	0.49	13.20	0.00 *
Boat Fuel	Private/Rental	12.88	0.73	17.19	0.87	14.87	1.67	18.63	1.87
Party/Charter Fee	Party Charter	22.02	3.03	34.35	4.10	35.50	8.66	44.38	8.02 *
Access/Boat Launching Fees	Party Charter	0.79	0.39	15.50	5.06 *	.	.	.	.
	Private/Rental	1.61	0.14	6.87	0.27	2.46	0.82	13.64	3.55
	Shore	0.58	0.14	5.52	0.60	0.67	0.56	9.00	6.00 *
Equipment Rental	Party Charter	0.91	0.49	15.29	6.60 *	.	.	.	.
	Private/Rental	0.24	0.16	34.25	16.95 *	2.00	2.00	200.00	.
	Shore	0.18	0.09	7.00	1.67 *	0.19	0.19	5.00	.
Bait	Party Charter	2.60	0.56	8.79	1.42	1.29	1.14	6.45	4.99 *
	Private/Rental	4.63	0.31	8.99	0.48	3.70	0.68	10.48	1.29
	Shore	5.67	0.47	7.53	0.53	6.55	1.51	10.40	1.85
Ice	Party Charter	3.26	1.37	8.68	3.52	0.66	0.66	6.60	.
	Private/Rental	3.53	0.68	7.16	1.34	2.89	1.09	6.03	2.19
	Shore	3.09	1.23	8.30	3.23	1.64	0.47	3.04	0.68
Total	Party Charter	61.43	4.23	187.34	21.08	78.40	11.81	133.91	13.57
	Private/Rental	48.86	1.27	161.26	19.32	53.32	3.81	378.30	60.02
	Shore	40.63	2.01	120.75	10.72	52.13	5.85	114.07	12.88
Wave Expenditures**		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		55.71	7.27	128.23	14.71	34.06	6.08	52.23	8.04
Other Tackle		29.66	3.41	54.35	5.56	19.36	2.57	25.70	2.90
Camping Equipment		2.26	0.64	57.07	9.96				
Binoculars		1.24	0.43	63.64	6.42				
Clothing		3.39	0.67	53.36	6.58				
Processing/Taxidermy		0.17	0.07	52.92	13.13				
Magazines		1.80	0.27	17.46	1.38				
Club Dues		1.48	0.27	23.13	2.94				
Miscellaneous		2.59	0.83	47.13	12.92				
Total		98.31	8.15	497.29	27.95	53.42	6.60	77.93	8.55
Annual Expenditures		All (\$)		Spenders (\$)					
Boat Expenses		54.54	11.95	696.63	118.52				
Power Boat Purchase		700.90	126.77	5,394.57	811.02				
Non-Power Boat Purchase		2.39	1.59	211.11	46.15				
Electronics		11.91	2.58	304.93	33.07				
Fishing Vehicle		180.41	65.75	8,176.84	1,920.95				
Vacation Home		0.54	0.53	2,301.21	2,403.19 *				
Total		950.68	143.34	5,332.89	3,184.40				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk only one observation was available.

** average expenditure across the previous 2 month wave of data collection.

Virginia



Table 25. Virginia Total Expenditures by Resident Status, 1998 (in thousands of dollars).

VIRGINIA		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Mode		Residents			Non-Residents		
Trip Expenditures							
Private Transportation	Party Charter	820	1,044	595	261	376	146
	Private/Rental	20,214	23,182	17,246	6,518	8,053	4,984
	Shore	12,165	14,729	9,601	3,264	4,296	2,233
Food	Party Charter	723	978	469	933	1,158	707
	Private/Rental	14,373	16,846	11,900	15,180	17,017	13,342
	Shore	7,650	9,780	5,520	11,113	12,693	9,533
Lodging	Party Charter	253	29	477	701	1,013	390
	Private/Rental	1,129	327	1,931	4,968	6,440	3,495
	Shore	1,684	437	2,931	7,113	8,880	5,346
Public Transportation	Party Charter	5	14	0	11	16	5
	Private/Rental	714	1,218	209	739	986	492
	Shore	118	275	0	98	150	45
Boat Fuel	Private/Rental	18,057	21,288	14,826	8,275	10,747	5,803
Party/Charter Fee	Party Charter	1,244	1,717	772	801	1,141	460
Access/Boat Launching Fees	Party Charter	45	89	0	0	0	0
	Private/Rental	2,264	2,759	1,770	1,366	1,682	1,050
	Shore	403	607	200	133	198	68
Equipment Rental	Party Charter	51	107	0	0	0	0
	Private/Rental	338	776	0	1,113	1,397	828
	Shore	127	252	3	37	73	1
Bait	Party Charter	147	220	74	29	56	2
	Private/Rental	6,494	7,746	5,243	2,061	2,600	1,523
	Shore	3,942	4,955	2,928	1,307	1,718	895
Ice	Party Charter	184	343	26	15	75	0
	Private/Rental	4,946	6,929	2,963	1,610	2,415	806
	Shore	2,143	3,865	422	327	812	0
Total	Party Charter	3,472	4,123	2,821	2,750	3,280	2,223
	Private/Rental	68,530	74,204	62,862	41,830	45,728	37,933
	Shore	28,232	32,324	24,142	23,391	26,055	20,752
Equipment and Durable Expenditures							
		Residents			Non-Residents		
Rods and Reels		36,912	46,666	27,158	9,398	14,058	4,738
Other Tackle		17,879	23,112	12,647	7,479	11,382	3,575
Camping Equipment		2,135	3,799	471			
Binoculars		820	1,407	232			
Clothing		2,226	3,181	1,272			
Processing/Taxidermy		101	187	14			
Magazines		1,239	1,689	790			
Club Dues		1,049	1,445	653			
Miscellaneous		2,391	4,995	0			
Boat Expenses		18,534	26,793	10,276			
Power Boat Purchase		238,167	327,294	149,041			
Non-Power Boat Purchase		811	1,873	0			
Electronics		4,047	5,828	2,265			
Fishing Vehicle		61,303	105,645	16,961			
Vacation Home		183	533	0			
All Sub-Totals		488,030	588,854	387,207	84,848	92,563	77,133
State Total		572,878	673,997	471,760			



Northeast Totals

Table 26. Total Northeast Region Expenditures, 1998 (millions of dollars).

NORTHEAST REGION	Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Residents			Non-Residents		
Private Transportation	83.31	88.45	78.18	28.16	30.51	25.80
Food	204.46	220.87	188.05	254.11	262.11	246.12
Lodging	25.71	32.59	18.84	98.17	107.20	89.14
Public Transportation	5.30	6.60	4.01	9.12	13.42	4.82
Boat Fuel	128.11	141.39	114.82	30.64	35.20	26.09
Party/Charter Fee	23.36	27.95	18.76	17.07	21.56	12.58
Access/Boat Launching	39.19	45.81	32.57	9.23	11.48	6.98
Equipment Rental	4.71	6.60	2.83	3.96	6.39	1.52
Bait	101.48	109.62	93.34	24.71	27.49	21.94
Ice	36.61	43.49	29.73	8.85	11.01	6.68
Trip Sub-Totals	652.24	678.76	625.73	484.01	499.30	468.72
Equipment and Durable Expenditures						
Rods and Reels	386.84	439.47	334.21	94.32	116.76	71.88
Other Tackle	184.41	212.46	156.35	44.76	52.34	37.19
Camping Equipment	27.75	36.25	19.26			
Binnoculars	11.65	15.88	7.43			
Clothing	37.51	44.86	30.16			
Processing/Taxidermy	1.47	2.19	0.75			
Magazines	19.97	22.81	17.13			
Club Dues	21.14	25.30	16.98			
Miscellaneous	17.67	22.28	13.06			
Boat Expenses	100.46	117.94	82.97			
Power Boat Purchase	1,775.54	2,258.57	1,292.50			
Non-Power Boat Purchase	5.96	9.52	2.41			
Electronics	51.89	65.15	38.63			
Fishing Vehicle	525.84	755.58	296.10			
Vacation Home	12.08	26.42	0.00			
Equipment and Durable Sub-Totals	3,180.18	3,715.77	2,644.60	139.09	162.77	115.40
All Sub-Totals	3,832.43	4,368.67	3,296.19	623.09	651.29	594.90
Northeast Region Total	4,455.52	4,992.50	3,918.54			

Total annual expenditures by resident anglers in NE coastal states in 1998 were substantially larger than those of non-residents. In part, this was because resident participants outnumbered non-residents by almost 2 to 1 and fished over 3 times as many days as non-residents. In most states, anglers fishing from private or rental boats spent considerably more than those who fished from shore or from a party or charter boat. The highest trip expenditures were generally for food and boat fuel, while the largest durable purchases were for power boats and fishing vehicles. Taken as a whole, the expenditure estimates provide an indication of the importance of marine recreational fishing to the economies of the coastal states in the NE.

At first glance, the state-level estimates of total marine recreational expenditures appear large. However, these expenditures represented less than 2%, on average, of the total sales of businesses that sold fishing-related items to anglers in the NE in 1998. About 75% of the total expenditure was for fishing equipment and durable items; items that may last for many years. The costs of two durable items, power boats/accessories and fishing vehicles/trailers, comprised almost 52% of total angler expenditures in 1998. Although anglers were asked to indicate the total costs of durable purchases made during the past 12 months, their actual outlay in 1998 may have been lower if purchases were financed. Because the main objective of this paper was to

estimate the total sales generated by anglers' expenditures, no attempt was made to identify this type of transaction.

For 7 of the 10 states in the NE, state-level expenditures estimated in this study are greater than those estimated from the U.S. Fish and Wildlife Service's 1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (USFWS 1996).⁷ The USFWS' expenditure estimates are higher for Maine, New Hampshire, and New Jersey, but lower for the remaining states, especially Massachusetts, Connecticut, Maryland, and Virginia. State-level participation estimates derived from the USFWS' survey are about 1 1/2 to 2 times lower than MRFSS participation estimates for 1996. As well, the USFWS' estimates of durable purchases are substantially lower than those estimated in this paper. Differences in sampling procedures may also have contributed to some of these disparities. The base MRFSS survey is specifically designed to provide statistically reliable estimates of saltwater angling effort, participation, and finfish catch. In contrast, the USFWS' survey is designed to provide information on fishing, hunting, and wildlife-watching activities. Saltwater fishing comprises a small portion of these recreation-related activities in most states. Thus, the coverage and sample sizes for saltwater fishing in the USFWS' survey are considerably smaller than in the MRFSS.

Purchases of motor boats/motor boat accessories was the largest expense category in each NE state. In fact, the estimate generated for the NE region (\$1.78 billion; Table 26) was greater than the National Marine Manufactures Association (NMMA) estimate of total retail sales of new and used recreational boats across all of the NE coastal states in 1997 (1.18 billion; NMMA 1998). The NMMA estimates, however, do not include personal sales of pre-owned boats. Although the intention was to exclude this type of purchase from the 1998 expenditure survey by only asking about “new” motor boat purchases and accessories, the distinction was not stressed and respondents may have interpreted “new” to mean any new expenditure in 1998. According to data obtained from USDL (1998) 53% of boat purchases in 1998 occurred through personal sales. Thus, the difference between our estimate and the NMMA’s estimate may be due to the inclusion of personal sales.

Results of the 1998 expenditure survey need to be considered in light of a number of data limitations and assumptions. First, even with 6,342 complete responses, sample sizes were insufficient to calculate statistically reliable mean trip expenditures for nonresidents fishing from party and charter boats in Connecticut, New York, and Virginia. In addition, because only a small portion of the survey respondents actually reported an expense for all of the expenditure items, estimates of purchases by ‘spenders’ were also constrained by sample size. Second,

non-resident expenditure estimates are conservative as they include only trip and equipment-related expenses, but not semi-durable and durable items. However, this bias may be small because many durable items are likely to be purchased in an angler’s state of residence and not in a coastal NE state. Lastly, although adjustments were made for avidity bias, no corrections were made for non-response bias. Anglers with considerable expenses may have been more willing to complete a lengthy telephone follow-up survey than those that spent very little, although no significant differences were detected in avidity between non-respondents and those that completed the follow-up survey.

Future Research

Expenditure estimates in this report will be used in the future to construct regional economic impact models. These models will be used to track the economic activity (i.e., sales, income, employment, and taxes) generated directly and indirectly from anglers’ expenditures in the NE. Ultimately, the models will provide the capability to recognize and assess relative impacts of recreational fishing management actions on communities and businesses. In other words, the models will delineate inter-sectoral linkages between marine recreation-related businesses within each state thereby allowing

quantification of the distributional impacts arising from changes in fishing activity, incomes, business practices, and/or other factors outside the control of fisheries management. An assessment of these impacts is required under the National Environmental Policy Act (NEPA), Executive Order 12866, and National Standard 8 of the Magnuson-Stevens Fisheries Conservation and Management Act.

In order to quantify angler expenditures nationwide, the three part expenditure survey was administered in the Southeast Region (North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana) in 1999/2000 and in the Pacific Region (California, Oregon, and Washington) in 2000. While the survey instruments varied regionally, the same set of core data elements was collected in all regions. An expenditure analysis of these data will follow the construction of the NE regional impact models. As a result, both a summary report and impact models created for each region are expected by late 2001 or early 2002.

Endnotes

1.No overnight anglers reported spending money on public transportation. Therefore, it was assumed that these expenditures were directly related to fishing.

2.To minimize recall bias, anglers were asked to indicate the amount spent during the previous 2-month MRFSS sampling wave. As such, the fishing equipment and semi-durable means presented in this paper represent average expenditures over a 2-month period.

3.The random digit dial survey is directed at households located in coastal counties. The majority of anglers living in coastal counties fish within their resident state. Whereas the intercept survey captures both coastal state residents and non-residents. Thus, to make the avidity comparison more tenable 2-month avidity estimates provided by residents of coastal states were used in the comparison.

4.Although \hat{R} is an unbiased estimator of R , equation 1 is not an unbiased estimator of \bar{R} because it is a ratio estimator (Thomson 1991). However, as the sample size increases the bias becomes negligible.

5.The participation estimates contained in Table 4 are not additive across waves. A participant could have fished in more than one wave. Addition of the estimates across waves results in

substantially greater numbers of annual participants than that shown in Table 5. At the state-level (see Table 5), resident participation estimates are additive but non-resident participants should not be added across states since they could have fished in more than one state.

6.Private transportation expenses were calculated for all respondents from the round trip miles traveled in the state where the fishing trip occurred. Thus, average expenditures are identical for the 'spenders' and the 'all' category.

7.The USFWS' 1996 expenditure estimates were adjusted to their 1998 equivalent, prior to making the comparison, by using the Bureau of Labor Statistics Consumer Price Index.

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Endnotes & References

Appendix 1: Intercept Add-on Survey Instrument

Appendix 1

1998 Northeast Add-On Economic Intercept Interview

* = Key Question

(If interviewer is not certain respondent is at least 16 years of age, simply ask respondent if he/she is at least 16 years of age. If < 16 years of age, then terminate and thank respondent).

*1. Is this fishing trip part of a longer trip in which you will spend at least one night away from your permanent residence, or is this a one-day fishing trip?

One day	1	> Go to Q.82% of trips in 1994)
Longer	2	
Don't know	888	
Refused	999	

2. How many nights will you be away from your permanent residence on this trip?

ENTER NUMBER	(≤365)
Don't know	888
Refused	999

3. How many days of this trip will you go fishing?

ENTER NUMBER	(≤Q.2. Response)
Don't know	888
Refused	999

4. Did you make this trip primarily to go fishing?

Yes	1
No	2
Don't know	888
Refused	999

*5. Counting today, within the last 2 months, how many days have you fished for (Prim1) from (Mode_fx) in this state? (If angler did not designate a target species then ask for number of days fished from mode_fx in this state)

ENTER NUMBER	(Response must be ≥ 1) (If = 1 then Go to Q.7)
Don't know	888
Refused	999

6. Did you fish at or launch from this city/town on all of those days?

Yes	1
No	2
Don't know	888
Refused	999

7. How would you rank your saltwater fishing ability for (Prim1) on a scale of 1 to 5 - 1 being a novice and 5 being an expert? (If angler did not designate a target species then drop reference to prim1)

ENTER NUMBER	(Response must be between 1 and 5)
Don't know	888
Refused	999

8. Do you or does anyone living in your household own a boat that is ever used for marine recreational fishing?

Yes	1
No	2
Don't Know	888
Refused	999

*9. How much did you, personally, spend on bait, tackle, food, and ice for this trip? Please do not include charter/guide services and boat rental fees.

ENTER AMOUNT	Format: \$____.00
Don't know	888
Refused	999

*10. Did you take time off from work without pay in order to make this fishing trip?

Yes	1	
No	2	>Go to Q.12
Don't Know	888	
Refused	999	

*11. About how much income, if any, did you give up in order to make this trip (Show income card used Maine Pilot Study)

ENTER CATEGORY	
Don't Know	888
Refused	999

*12. I appreciate your time for this interview. There is another part to this survey that involves a short follow-up interview by telephone. Would you be willing to participate in this follow-up survey?

Yes	1
Don't Know	888
Refused	999

If angler did not release name and/or phone number during MRFSS portion of the survey (Q.2?. MRFSS), state: To participate, may I have your name and a phone number?

Thank you for your time!

Appendix 2: Phone Follow-up Survey Instrument

Validation Interview

Hello, my I please speak with [NAME OF RESPONDENT]? Hello, this is _____ calling from QuanTech in Rosslyn, Virginia. I am calling to verify an interview one of our staff members conducted with you during a recent day of fishing in [STATE].

Q1: Our records indicate that on [DATE] you spoke with one of our field staff members during a day of saltwater recreational fishing in [STATE] at [SITE]. Were you interviewed?

- 1 Yes/Interviewed
- 2 No/Never interviewed THANK YOU/TRIPS
- 3 Interviewer spoke with party/respondent didn't volunteer to be called
- 8 Don't know/Don't remember THANK YOU/TRIPS
- 9 Refused THANK YOU/TRIPS

Q2 Did the interviewer conduct the interview in a courteous and professional manner?

- 1 Yes
- 2 No
- 8 Don't know/Don't remember
- 9 Refused

Q3 Please tell me why you think they were discourteous or unprofessional.

____enter response____

Q4 Did you catch any fish that were available for the interviewer to look at? By that, I mean fish that you had not thrown back, used for bait, or filleted?

- 1 Yes
- 2 No SKIP TO Q12
- 8 Don't know SKIP TO Q12
- 9 Refused SKIP TO Q12

The remaining questions refer only to the fish you kept that were not used for bait or filleted.

Q5 Did the interviewer look at all of your fish, some of your fish, or none of your fish?

- 1 All fish looked at SKIP TO Q7
- 2 Some fish looked at
- 3 No fish looked at SKIP TO Q128 Don't know SKIP TO Q12
- 9 Refused SKIP TO Q12

Q6 Why didn't the interviewer look at all of your fish?

[CONFIRM CATEGORY WITH RESPONDENT]

- 1 Didn't have time/didn't want to unpack, etc.2 There were too many/more than 15 of one species
- 3 The interviewer didn't ask to see them
- 7 Other (specify)
- 8 Don't know
- 9 Refused

Q6a ____Specify other reason____

Q7 Did the interviewer weigh all of your fish, some of your fish, or none of your fish?

Q8 Why didn't the interviewer weigh all of your fish?

[CONFIRM CATEGORY WITH RESPONDENT]

- 1 I didn't have time/didn't want to unpack/etc.
- 2 They were gutted
- 3 There were too many/more than 15 per species
- 4 They were too big
- 5 The interviewer didn't ask to see them
- 7 Other (specify)
- 8 Don't know
- 9 Refused

Q8a ____ Specify other reason ____

Q9 Did the interviewer measure the length of all of your fish, some of your fish, or none of your fish?

Q10 Why didn't the interviewer measure the length of all of your fish?

Q11 Did the interviewer use a measuring board or a pull-out tape measure to measure your fish?

- 1 Measuring board
- 2 Tape measure
- 8 Don't know
- 9 Refused

Actual Telephone Expenditure Follow-up

Some Notes:

The TRIPDATE field that is used in the questionnaire is formatted as in the following example: "March 25, 1999". Also, during the Introduction the SITENAME (location of field intercept) and STATE (state of intercept) are referenced.

These are the only occurrences of variable text in the AMES portion of the questionnaire.

Hello, may I please speak with [NAME]? This is [INTERVIEWER], calling from QuanTech in Rosslyn, Virginia. You spoke with one of your field staff member on [TRIPDATE] during a day of fishing in [STATE] at [SITENAME].

I am calling to ask a few follow-up questions that could not be collected in the field.

This study is being conducted in accordance with the privacy act of 1974. You are not required to answer any question that you consider to be an invasion of your privacy.

Q1. Have you been saltwater fishing since [TRIPDATE], the day you were interviewed?

- 1 Yes
- 2 No SKIPTO Q9
- 7 HELP
- 8 Don't know SKIPTO Q9
- 9 Refused SKIPTO Q9

Q2. Please think of your most recent day of saltwater fishing. Did you fish from a ...

- 1 Party/charter boat
- 2 Private boat
- 3 Rental boat
- 4 Shore (beach, bank, jetty, pier)
- 8 Don't know
- 9 Refused

Q3. Were you targeting or hoping to catch any particular species or kinds of fish?

Accept up to two target species

- 9997 Anything/no particular species
- 0001 Species 1
- 0002 Species 2
- 0003 Species 3
- 0050 Species 50
- 9995 Other (specify)
- 9996 Other (specify)
- 9998 Don't know
- 9999 Refused

The species you have selected are:

- Species 1
- Species 2

Q4. What city and state did you fish in?

Enter name of city:
[STATE LIST]

Q5. Was that day of fishing part of a longer trip in which you spent at least one night away from your residence?

1 Yes
2 No SKIPTO PEOP_PAY
8 Don't know
9 Refused

Q6. How many nights were you away from residence on that trip?

Don'tknow=DK, Refused=RF
___ nights

Q7. How many days of the trip were spent fishing?

Don'tknow=DK, Refused=RF
___ days

Q8. Did you make the trip primarily to go fishing?

1 Yes
2 No
8 Don't know
9 Refused

TWO ALTERNATIVE PHRASINGS BASED ON ABOVE RESPONSES

1. "I would like to ask you about expenses made for consumable items during the trip that included the day you were intercepted." [This text applied to respondents who said they fished in PC mode when they were interviewed in the field or those who stated earlier in the telephone survey that they had not taken any saltwater trips since they were intercepted in the field. SKIPPED FROM Q1 TO Q9]
2. "I would like to ask you about expenses made for consumable items during your trip (this most recent one we've been talking about)." [This text applied to respondents who stated a fishing mode other than PC when they were interviewed in the field and said they had taken saltwater fishing trips since they were intercepted. NO SKIP FROM Q1]

Q9. How many people contributed to expenses for the trip?

Don'tknow=DK, Refused=RF
___ number of people

Q10. About how much did you individually spend for the following items?

Don'tknow=DK, Refused=RF

	Ind	Group
Food, drink and refreshments.....		
Lodging at motels, cabins, lodges or campgrounds.....		
Transportation other than your own car, such as plane, train, bus or car rental.....		
Boat fuel.....		
Guide or package fees (for party or charter boats).....		
Access and/or boat launching fees (for access to pier, park, launch).....		
Equipment rental (boat, fishing or camping equipment).....		
Bait (live, cut or prepared).....		
Ice.....		
DK/RF TO ALL or SPENT NOTHING ON THESE ITEMS.....		DK/RF/00

Q11. Could you estimate the total amount that was spent for the trip?

Individually _____
Group _____

Q12. On an annual basis, how much do you usually spend on mooring, storage, maintenance, and insurance for your (primary fishing) boat?

Don't know=DK, Refused=RF

Amount _____

For the next several questions, I'd like you to think about fishing equipment which was purchased during [MONTHS].

NOTES FOR INTERVIEWER

Wherever [MONTHS] appears, use the following protocols.

1. If the field interview occurred during Jan-Apr, the MONTH field reads "November through February"
2. If the field interview occurred during May-Jun, the MONTH field reads "March and April"
3. If the field interview occurred during Jul-Aug, the MONTH field reads "May and June"
4. If the field interview occurred during Sep-Oct, the MONTH field reads "July and August"
5. If the field interview occurred during Nov-Dec, the MONTH field reads "September and October"

Q13. For purchases during [MONTHS], how much did you spend on...

Don't know='DK', Refused='RF'

Rods, poles, reels, and lines.
Tackle and gear (lures, hooks, leaders, sinkers, flies, and fly-tying
supplies/tackle boxes, landing nets, bait containers, minnow seines,
knives).
DK/RF TO ALL or SPENT NOTHING ON THESE ITEMS.....

Q14. Could you tell me the total amount that was spent for fishing equipment purchases during [MONTHS]?

Amount _____

Q15. And we're interested in how much you spent for several items purchased during [MONTHS], where the items were purchased primarily for use in saltwater recreational fishing.

Camping equipment primarily used for saltwater recreation-
al fishing (sleeping bags, packs, tents, etc.).
Binoculars, field glasses, etc.
Special fishing clothing (foul weather gear, boots, waders)
Processing and taxidermy fees.
Magazine subscriptions devoted to recreational fishing.
Dues or contributions to national, state or local recreat-
ional fishing clubs or organizations.
Any other miscellaneous expense not listed elsewhere.
DK/RF TO ALL or SPENT NOTHING ON THESE ITEMS..... DK/RF/00

Q16. Could you tell me the total amount that was spent for these types of items during [MONTHS], where the items were purchased primarily for saltwater recreational fishing?

Amount _____

The last set of questions concerns new boats and durable equipment that was purchased...during the last 12 months... to be used primarily for saltwater recreational fishing.

Q17. How much did you spend on....

New motor boat or purchase of motor boat accessories, including
hull, motor and accessories.

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Canoe or other non-motor boat.
Depth/fish finder or other electronic fishing devices.
Vehicles used primarily for saltwater recreational fishing
(pickup, camper, RV, motor home, trailer/hitch)
Cabin or second home used primarily for saltwater recreational fishing.
DK/RF TO ALL or SPENT NOTHING ON THESE ITEMS..... DK/RF/00

Q18. Could you tell me the total amount that was spent for durable fishing equipment purchases such as these during the last twelve months?

Amount _____

These final questions are for statistical purposes and to help us be sure we've spoken with a random sample of anglers.

Q19. How old were you on your last birthday?

Don't know='DK', Refused='RF'

Age _____

If AGE was DK or RF=In which of the following age groups do you belong?...

- 1 16-24
- 2 25-34
- 3 35-44
- 4 45-54
- 5 55-64
- 6 65 and over
- 8 Don't know
- 9 Refused

Q20. What was the last grade of formal education you completed?

- 01 Less than 9th grade
- 02 9th to 12th grade \Bno diploma\E
- 03 High school graduate/GED
- 04 Some college \Bno degree\E
- 05 Two years college/Associates degree
- 06 Four years college/Bachelor's degree
- 07 Graduate or professional degree
- 08 Don't know
- 09 Refused

Q21. Would you describe your ethnic background as...

- 1 White
- 2 Black
- 3 American Indian
- 4 Asian
- 5 Hispanic/Spanish
- 7 Other
- 8 Don't know
- 9 Refused

If ETHNIC=5 Which group best describes your Hispanic or Spanish origin?

- 1 White
- 2 Black
- 3 American Indian
- 4 Asian
- 7 Other
- 8 Don't know
- 9 Refused

Those are all the questions I have for you. Thank you very much for your time and cooperation.

CODE RESPONDENT'S GENDER:

- 1 Male
- 2 Female

Would you say this respondent was overall cooperative, or did they hesitate in providing the expenditure responses?

- 1 Cooperative
- 2 Hesitant - no extra notes to leave
- 3 Hesitant - I would like to leave a note about this

Appendix 3: Random Household Add-on Survey Instrument

Northeast-- Supplemental Economic Add-on Questionnaire
Dated: July 13, 1998
Revision #7

EDITING CONVENTIONS:

- ❖ Instructions to the programmer are enclosed in curly brackets - { }.
- ❖ Prompts for interviewers are enclosed in square brackets - [].
- ❖ General comments (often explaining skip patterns) are preceded by an apostrophe - '.
- ❖ For 1st non-refusing 2-month angler with in-state and/or out-of-state trips
- ❖ Question 1 and the age question shall be asked for the first day of fishing discussed by the angler regardless of in-state or out-of-state trip (provided state of residence and state of trip completion can be determined). They shall be asked after the trip loop questions in the base MRFSS survey for one mode (see following priority list) of fishing on the first day discussed, based on the following mode priority: (1) party/charter; (2) private/rental boat; and (3) shore.
- ❖ Questions 2 - 7a will come after all of the trip loop questions are asked, before transferring to the next fisher/terminating the call.
- ❖ If state of trip is not known, these questions will not be asked.

{Age:

Are you at least 16 years of age?

1 Yes

{set flag age=1}

2 No/DK/R}

{Ask the following questions if age=1; if age=0, skip these questions}

{Q1:

1. Were you targeting or hoping to catch any particular species/kinds of fish during your most recent day of saltwater fishing?

01 No particular species/fishing for anything

02 Display species list - refer to attached}

{Spec_fu1: Ask if species is Bottom fish, flatfish, flounder, seatrout, shark, tuna

Do you know what kind of {restore fish name} that was? Is there another name for that fish?

1 yes - reset to Q1

2 no}

{Q1_A:

1_A: Record second species targeted. Do not prompt for species.}

{Spec_fu2: Ask if species is Bottom fish, flatfish, flounder, seatrout, shark, tuna

Do you know what kind of {restore fish name} that was? Is there another name for that fish?

1 yes - reset to Q1_A

2 no}

❖ Questions 2 - 7a will come after all of the trip loop questions are asked, before transferring to the next fisher/terminating the call.

{Q2:

2. For this next set of questions, please think back to the first fishing trip you told me about, which was {restore month and day}. Was that day of fishing part of a longer trip in which you spent at least one night away from your residence?

1 Yes

{SKIPTO Q5B} 2 No

{SKIPTO Q5B} 8 DK

{SKIPTO Q5B} 9 Refused}

{Q3:

3. How many nights were you away from your residence on that trip?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

1 record response

{range is 1 to 365}

8 DK

9 Refused}

{Q4:

4. On how many days of that {restore Q3 response and the word day} trip did you fish at least part of the day?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

1 record response

{range is 1 - Q3 response}

8 Don't Know

9 Refused}

{Q5:

5. Did you make that trip primarily to go fishing?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused}

{Q5B:

5B. Now I would like to ask you about expenses made on consumable items during your trip.
[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

{If Q2 is 1,8 or 9, display: We're interested in expenditures for the entire trip. Thus, for those on overnight trips, please provide total expenditures for the entire trip — not just those that apply to the time spent fishing.}

How many people, including yourself, contributed to the expenses for the trip?

- 1 record response {range is 1 to 50} {if response > 1, set flag group=1}
- 8 Don't Know
- 9 Refused}

{Q6A:

6A. On your most recent fishing trip how much did you personally spend for food, drink and refreshments?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

- {skipto preQ6B} 1 record amount spent {range is 1 to 999}
- 8 DK
- 9 R}

' Ask if group=1

{Q6A_2:

6A_2 Do you know how much the group spent for food, drink and refreshments on the trip?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

- 1 record amount spent {range is 1 to 999}
- 8 DK
- 9 R}

{preQ6B: If Q2=2, go to preQ6C}

{Q6B:

6B: On your most recent fishing trip how much did you personally spend for Lodging at motels, cabins, lodges, or campgrounds?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

{skipto preQ6C} 1 record amount spent {range is 1 to 9999}

8 DK

9 R}

' Ask if group=1

{Q6B_2:

6B_2. Do you know how much the group spent for lodging at motels, cabins, lodges or campgrounds?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

1 record amount spent {range is 1 to 9999}

8 DK

9 R}

{preQ6C - If not a boat trip, go to Q7}

{Q6C:

6C. On your most recent fishing trip how much did you personally spend for boat fuel?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

{skipto Q7} 1 record amount spent {range is 1 to 999}

8 DK

9 R}

'Ask if group=1

{Q6C_2:

6C_2. Do you know how much the group spent for boat fuel?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

1 record amount spent {range is 1 to 999}

8 DK

9 R}

{Q7:

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7. Were all these expenditures made in {restore state of trip}?

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

{skipto Q8intro} 1 Yes

2 No

{skipto Q8intro} 8 DK

{skipto Q8intro} 9 R}

{Q7A:

7a. Approximately what proportion of these expenditures were made in {restore state of trip}?

[INTERVIEW: Obtain the percent of expenditures made in {restore state of residence}].

[Interviewer - as needed: Remember, we're talking about the first day of fishing you told me about, which was on {restore month and day}.]

1 record response

{range is 0 to 99}

8 DK

9 R}

{Q8INTRO:

Now, I would like to ask you about fishing equipment you purchased during {restore recall period}.

To the nearest dollar, what is the value of the following items that you bought during {restore recall period}.

{Q8A:

8a. Rods, reels, and lines?

[Prompt as needed: To the nearest dollar, what is the value of these items that you bought during {restore recall period}.]

1 record response

{range is 0 to 9999}

8 DK

9 R}

{Q8B:

8b. Tackle (like lures, hooks, leaders, sinkers, flies) and gear (like tackle boxes, knives, bait containers)?

[Prompt as needed: To the nearest dollar, what is the value of these items that you bought during {restore recall period}.]

1 record response

{range is 0 to 9999}

8 DK

9 R}

{If Q8+Q8A+Q8B sum to 0, go to Q10intro}

{Q9.

9. Were all of your expenditures for these items made in {restore state of trip}?

[Items include: Rods, reels, lines, tackle (like lures, hooks, leaders, sinkers, flies) and gear (like tackle boxes, knives, bait containers)]

{skipto Q10INTRO} 1 Yes

2 No

{skipto Q10INTRO} 8 DK

{skipto Q10INTRO} 9 R}

{Q9A:

9a. What proportion of your expenditures for these expenditures were made in {restore state of trip}?

[Items include: rods, poles, reels, components for rod making, tackle, and lines.]

[INTERVIEW: Obtain the percent of expenditures made in {restore state of residence}].

1 record response

{range is 0 to 99}

8 DK

9 R}

{Q10INTRO:

Now, I would like to ask about your expenses for several items that you may have purchased during {restore recall period} that are primarily used for saltwater recreational fishing.

How much did you spend on ...}

{Q10A.

10a. Special fishing clothing, foul weather gear, boots, waders or similar items?

[Prompt as needed: How much did you spend on these items between {restore recall period} that were primarily used for saltwater recreational fishing.]

1 record response

{range is 0 to 999}

8 DK

9 R}

{Q10B.

10b. Magazines subscriptions devoted to fishing?

[Prompt as needed: How much did you spend on these items between {restore recall period} that were primarily used for saltwater recreational fishing.]

1 record response

{range is 0 to 999}

8 DK

9 R}

{Q10C:

10c. Dues or contributions to National, state or local recreational fishing clubs or organizations?

[Prompt as needed: How much did you spend on these items between {restore recall period} that were primarily used for saltwater recreational fishing.]

1 record response {range is 0 to 999}

8 DK

9 R}

{If Q10+Q10A+Q10B+Q10C sum to 0, go to Q12intro}

{Q11:

11. Were all your expenditures on these items made in {restore state of residence}?

[Items include: Special fishing clothing, foul weather gear, boots, waders or similar items, magazines subscriptions devoted to fishing, dues or contributions to National, state or local recreational fishing clubs or organization.]

{skipto Q12INTRO} 1 Yes

2 No

{skipto Q12INTRO} 8 DK

{skipto Q12INTRO} 9 R}

{Q11A:

11a. What proportion of these expenditures were made in {restore state of residence}?

[INTERVIEW: Obtain the percent of expenditures made in {restore state of residence}].

1 record response {range is 0 to 99}

8 DK

9 R}

{Q12INTRO:

Lastly, I would like to ask about purchases that you may have made during the past 12-months for new boats and other durable equipment that you use ~~primarily~~ for saltwater recreational fishing.

How much did you spend on ...}

{Q12A:

12a. A new motor boat, boat motor, or boat accessories?

[Prompt as needed: How much did you spend during the past 12 months for these item(s) that you use primarily for saltwater recreational fishing.]

1 record response {range is 0 to 99999}
 8 DK
 9 R}

{Q12B:

12b. Depth/fish finder or other electronic fishing device?

[Prompt as needed: How much did you spend during the past 12 months for these item(s) that you use primarily for saltwater recreational fishing.]

1 record response {range is 0 to 9999}
 8 DK
 9 R}

{Q12C:

12c. Canoe or other non-motor boat?

[Prompt as needed: How much did you spend during the past 12 months for these item(s) that you use primarily for saltwater recreational fishing.]

1 record response {range is 0 to 9999}
 8 DK
 9 R}

{Q12D:

12d. Vehicles used primarily for saltwater fishing (like a pickup, camper, RV, boat trailer/hitch)?

[Prompt as needed: How much did you spend during the past 12 months for these item(s) that you use primarily for saltwater recreational fishing.]

1 record response {range is 0 to 99999}
 8 DK
 9 R}

{If Q12+Q12A+Q12B+Q12C+Q12D sum to 0, go to label neconend}

{Q13:

13. Were all your expenditures for these items made in {restore state of residence}?
 [Items include: A new motor boat, boat motor, boat accessories; Depth/fish finder or other

Appendix 3

electronic fishing device; Canoe or other non-motor boat; or Vehicles used primarily for saltwater fishing (pickup, camper, RV, boat trailer/hitch)

{goto NECONEND} 1 Yes

2 No

{goto NECONEND} 8 DK

{goto NECONEND} 9 R}

{Q13A:

13a. What proportion of these expenditures were made in {restore state of residence}?

[INTERVIEW: Obtain the percent of expenditures made in {restore state of residence}].

1 record response {range is 0 to 99}

8 DK

9 R}

{LABEL NECONEND}

Northeast Economic Add-On -- Species List

01 anything/nothing

02 albacore

03 atlantic bonito

04 atlantic cod

05 atlantic croaker

06 atlantic herring

07 atlantic mackerel

08 black bass

09 black sea bass

10 blackfish

11 blue shark

12 bluefin tuna

13 bluefish

14 bonito

15 BOTTOM FISH

16 channel catfish

17 cobia

18 cod

19 croaker

20 false albacore

21 FLATFISH

22 FLOUNDER

23 fluke

- 24 gray seatrout
- 25 haddock
- 26 hickory shad
- 27 king mackerel
- 28 largemouth bass
- 29 little tunny
- 30 mako shark
- 31 northern kingfish
- 32 pollock
- 33 rainbow smelt
- 34 red drum
- 35 red hake
- 36 rockfish
- 37 scup
- 38 SEATROUT
- 39 SHARK
- 40 shortfin mako
- 41 smallmouth bass
- 42 spanish mackerel
- 43 spot
- 44 spotted seatrout
- 45 striped bass
- 46 summer flounder
- 47 tautog
- 48 TUNA
- 49 weakfish
- 50 white perch
- 51 winter flounder
- 52 yellow perch
- 53 yellowfin tuna
- 88 other (specify:)
- 98 don't know
- 99 refused

